

CSR Report 2017

NIPPON SHOKUBAI CO., LTD.



Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

| Group Mission / Management Commitment |

Nippon Shokubai Group Mission

TechnoAmenity

Providing affluence and comfort to people and society,
with our unique technology.

Management Commitment

We conduct all of our corporate activities based upon a deep respect for humanity.

We aim at coexisting with society, and working in harmony with the environment.

We pursue technologies that will create the future.

We act on the global stage.

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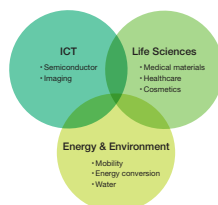
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Message from the President



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The 2nd Medium-term Business Plan: "Reborn Nippon Shokubai 2020 NEXT"



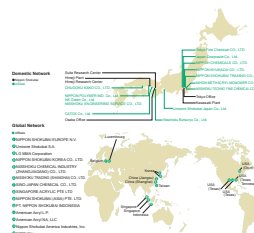
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Our Product Lines / Research & Development Highlights



| Corporate Credo |

Safety takes priority over production.

| Nippon Shokubai Code of Conduct |

In the belief that it is our social responsibility to conduct business based upon the principles of compliance and self-responsibility for the sake of proper social development, we have set forth the following basic corporate behavior guidelines as the “Nippon Shokubai Code of Conduct.”

1. Guided by our Group Mission of **TechnoAmenity**, we will conduct all of our actions as a good corporate citizen.
2. We will comply with relevant laws both inside and outside of Japan, and act in accordance with in-house regulations.
3. We will create and nurture a sound, vibrant workplace, where each individual can hone their professional competence and find fulfillment in their career.
4. We will develop and market products and services that are both safe and useful, based upon an accurate understanding of social demands.
5. We will commit ourselves to eliminating labor hazards and accidents, and constantly strive to protect the global environment.
6. We will conduct business based on fair and open competition.
7. We will take a firm stance when dealing with unlawful or antisocial groups.
8. We will ensure frequent communications with our shareholders and members of society in general, and guarantee the appropriate disclosure of corporate information.
9. With respect for the culture and customs of every nation/region we serve, we will contribute to their development and wellbeing through community-based business undertakings.
10. We will ensure the solid and sustainable development of the company through business undertakings based soundly upon the above action guidelines.



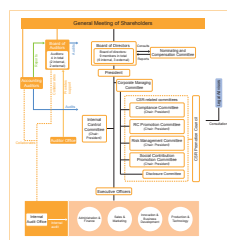
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Corporate Governance



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Earning Public Trust and Contributing to Society



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Responsible Care Activities



Message from the President

Introducing our 2nd Medium-term Business Plan,

Our Long-term Business Plan: A Closer Look at Our 1st and 2nd Medium-term Business Plans

Since fiscal 2014, we have been diligently implementing “Reborn Nippon Shokubai 2020,” our long-term business plan spanning seven years. Regarding our 1st Medium-term Business Plan, we achieved our performance targets for both fiscal 2014 and fiscal 2015, ensuring a smooth start to our efforts. However, we were buffeted by groundbreaking shifts in the economic environment in fiscal 2016. As a result, we experienced significant declines in both revenue and profits despite year-on-year increases in sales volumes.

Considering the rapid changes that were arising in the economic environment, the company was gripped by a sense of crisis that no pathway was available for implementing our strategy. We concluded that this situation had presented an opportunity for our company to become reborn. In our 2nd Medium-term Business Plan, we refined our strategy anew by setting our sights on our Vision for 2025, becoming “an innovative chemical company that provides new value for people’s lives.” In order to express a strong message signifying our rebirth, we created “Reborn Nippon Shokubai 2020 NEXT.” As we further strengthen our existing businesses of performance chemicals, new energy, and health and medical care, we will focus on sustainable growth by taking on the challenge of rapidly entering new fields that enable us to build on our strengths.

Safety Initiatives

Alongside our Group Mission and Management Commitment, we are placing our highest priority on our corporate credo of “Safety takes priority over production.” At the same time, we are working to strengthen our corporate culture of prioritized safety while improving our safety awareness, knowledge, and skills.

Since the accident that impacted our Himeji Plant in 2012, we have been taking steps to further strengthen our ability to eliminate the possibility of any recurrence, providing our manufacturing sites with strong preparedness capabilities that will prevent any possible repeat of such accidents. In order to evaluate this initiative, we underwent a third-party inspection in December 2016. The report we subsequently received indicated that the steps we are taking to enrich and thoroughly implement measures to prevent any recurrence are adequate. This report expects that we will continue to

extend these activities and maintain our focus on fostering a culture of safety. However, we are not satisfied with the current situation and we remain committed to strengthening our diligent efforts to ensure safe and reliable operation in order to again become a responsible chemical company that succeeds at retaining the public’s trust.

Energizing Our Organization and Corporate Teams

Our goal is to strive to foster a climate that encourages all our employees to think and act independently with an awareness of their respective roles. In January 2015, we launched initiatives intended to reform our corporate culture and have continued to implement a variety of initiatives that include revision of the personnel evaluation system for managerial employees and enhancement of educational programs. Although these innovations have begun to effect change on a gradual basis, each and every one will raise awareness and create the proper mindset as we focus our power and aim for a stronger and more energized organization.

Conclusion

Even in this era of uncertainty that makes the task of forecasting exceedingly challenging, our Group is remaining steadfast as we identify the needs of society, develop products and services, and deliver them in a timely manner. We intend to vigorously implement our Group Mission as follows:

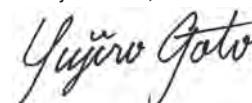
TechnoAmenity

Providing affluence and comfort to people and society,
with our unique technology.

In this edition of our *CSR Report*, we continue to present the corporate social responsibility (CSR) initiatives of the Nippon Shokubai Group in a manner that is easier to understand.

We welcome your continued support and candid opinions, and we greatly appreciate your cooperation with our Group’s initiatives.

Yujiro Goto, President



“Reborn Nippon Shokubai 2020 NEXT”



The 2nd Medium-term Business Plan: “Reborn Nippon Shokubai 2020 NEXT”

Implementing Our Vision for 2025

After reviewing our 1st Medium-term Business Plan and analyzing the ongoing changes in the world around us, we have introduced our 2nd Medium-term Business Plan titled “Reborn Nippon Shokubai 2020 NEXT.” This is a concrete action plan for achieving our “Targets for 2020” in order to realize our “Vision for 2025.”

In order to achieve our targets for 2020, we are focused on adhering to the plans that will implement our established corporate strategy. We intend to uphold our Group Mission of “**TechnoAmenity** — Providing affluence and comfort to people and society, with our unique technology.” We will work on achieving the plan.

In terms of implementing this plan, all our employees will work to achieve our targets by maintaining a crisis consciousness and remaining aware of their responsibilities as the individuals in

charge. By encouraging all employees to think and act on their own with a sense of duty, we are creating “a company that everybody can be proud of.”* By 2020, the final fiscal year of our 2nd Medium-term Business Plan, our aim is to make it possible to anticipate our Group’s assured growth over the subsequent decade.

* A company that everybody can be proud of

1. A company that promotes work safety and peace of mind
2. A company that rewards people who make their best efforts and achieve results
3. A company that people can be proud to work for

2017

Targets for
2020

■ Corporate Strategy

In our 2nd Medium-term Business Plan, “Reborn Nippon Shokubai 2020 NEXT,” we will work on implementing our plan by adopting the following Business Policies, Priority Challenge, and Basic Posture.

Business Policies

- Focusing on profitability over sales
- Safe, reliable production activities

Priority Challenge

- Survival of SAP* business
- Launch of new businesses in high-growth potential markets for our future key driver

Basic Posture

Create products and services that the market needs, and provide the products and the services when the market needs.



* Superabsorbent polymer

Policies to priority challenge

- Strengthen competitiveness of SAP business
 - Improve profitability (Survival project)
 - Strengthen R&D
- Accelerate creation of new businesses and products
 - Identifying target sectors

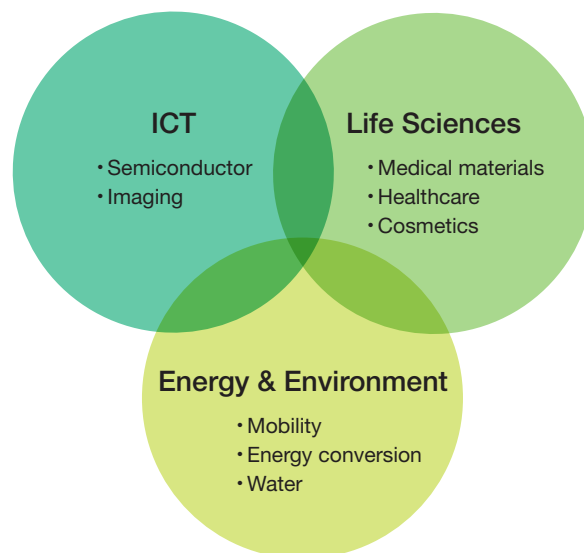
Target to sustainable growth

In order to strengthen the foundation for the Group’s sustainable growth, we are addressing the following issues.

- Develop an active corporate team and organization
- Enhance the confidence of stakeholders
- Strengthen our Group management

■ Target Sectors

We set out to create new businesses after considering the market potential, our familiarity with the business, and social issues. We chose eight areas of business in three business sectors for our new businesses.



Create new businesses with new technologies based on our core technologies

Targets

- Enter into each sector with core product by 2020 (sales amount by 1 billion yen each)
- Establish business in each sector by 2025 (sales amount by 10 billion yen each)

We promote open innovation and M&A in order to achieve the targets above.

Vision for 2025

Vision for 2025

An innovative chemical company
that provides new value for people's lives

We;

- Take on the challenge of creating new value by developing new products and business through our advanced technologies and our creativity
- Deliver new value globally through our unique products and technologies
- Manufacture products that embody new value and feature the highest safety and productivity
- Create new value that contributes to the global environment
- Create new value by promoting dynamism and diversity in the workplace throughout all Group companies

Segment: Existing businesses, such as EO, AA/SAP, etc., will be strengthened more. Performance chemicals, new energy materials, health and medical materials and/or any other new businesses* will contribute more to corporate profit. As a result, these expected businesses will be expanded much more and be higher position in comparison to the existing businesses.

Area: Accelerate business development continuously throughout the global market.

Strength: Employ our competencies in R&D, production technologies and marketing and maximize the synergy from such activities.

* Businesses in the market that we could not enter into yet, or businesses in the market that is not formed yet.

Targets for 2020

In keeping with our "Vision for 2025," we adopted the concrete targets shown below for 2020. We later reviewed our targets because the facts on which we had based our initial assumptions for our long-term business plan had deviated considerably, as seen in the significant decline in the naphtha price, for example.

Management indexes and numerical targets

Sales 400 billion yen	Ordinary income 40 billion yen	ROA 7.5%
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Assumptions

	Domestic naphtha price	Exchange rate (US\$)	Exchange rate (EUR)
LTP* (FY2014-2020) (established in 2014)	65,000 yen/kL	100 yen	130 yen
2nd MTP** (FY2017-2020)	42,000 yen/kL	110 yen	115 yen

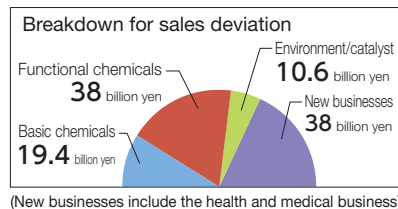
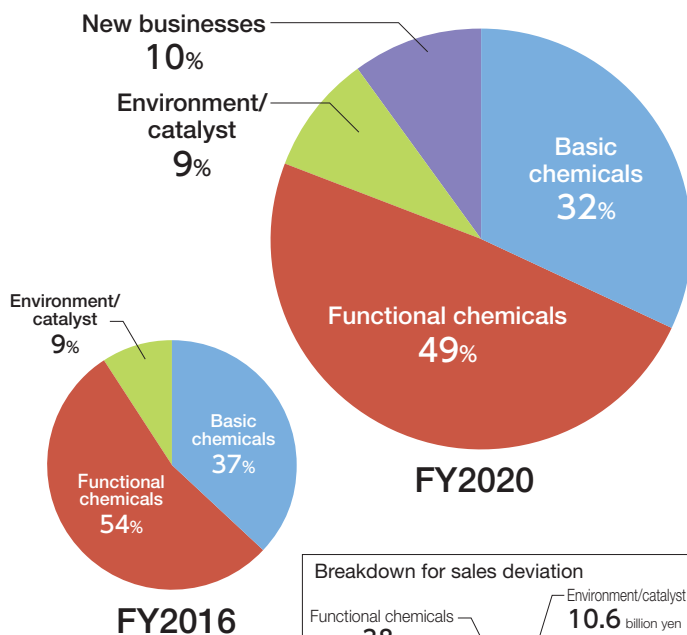
* Long-term Business Plan

** Medium-term Business Plan

Management resources (Total, fiscal 2017 to fiscal 2020)

Capital investment 90 billion yen	Strategic investment 60 billion yen
R&D expenses 57 billion yen	Employees as of the end of FY2020 4,600 (Employees as of the end of FY2016 : 4,161)

Business portfolio





Special Feature
 Creating Value through R&D

Contributing to society by offering products of high value incorporating innovative technologies

- R&D Policy**
- 1 Enhance existing and core businesses.
 - 2 Accelerate product development and the creation of new businesses.
 - 3 Utilize open innovation to speed research and development.

Mission

In order to enhance the competitiveness of our existing businesses and core products while accelerating the creation of new businesses and product development, we will incorporate external strengths by employing open innovation that energizes the company while taking full advantage of our own technologies. Moreover, we will contribute to society by offering products of high value incorporating innovative technologies.

**Our Commitment to the “Reborn Nippon Shokubai 2020 NEXT,”
 Our 2nd Medium-term Business Plan**

In our core businesses of Acrylic Acid and Super Absorbent Polymer, we will continue to improve our catalysts and process efficiency. As for new products, IONEL (p. 9) and ZIRCOSTAR (p. 13) are being used in an ever-growing list of applications, and we are further enhancing these products to promote the early development of successful large-scale businesses. Regarding new businesses, we are pursuing initiatives to create our next core businesses in addition to our health and medical business.

Strengthening Our Core Competencies and Accelerating Development through Open Innovation

We will accelerate development of our products and technologies and will engage in technology benchmarking while strengthening our core competencies and collaborating with industry, government and academia. As we accelerate development, we will also actively seek M&A opportunities. We believe this will be crucial to the success of training human resources with a global perspective.

Yojiro Takahashi

Member of the Board, Managing Executive Officer
 Innovation & Business Development
 (Head of Health and Medical Business Development
 Office, Head of Malonates Business Development Office,
 Head of Cosmetics Business Planning Office)



New Energy Business

IONEL Electrolyte for Lithium-Ion Batteries An innovative material for a better society

Social Issues

The shift from gasoline-fueled vehicles to electric vehicles has become a global trend that is contributing to environmental protection. Accordingly, this trend requires that lithium-ion batteries offer improved performance at a lower price. When used in motor vehicles, these batteries must be safe and able to withstand long-term use while maintaining performance that does not deteriorate in hot or cold climates.

Contributing to the Popularization of Electric Vehicles

IONEL [Lithium bis(fluorosulfonyl)imide, or LiFSI], an electrolyte for high-purity lithium-ion batteries developed with our proprietary technology, further improves battery life while significantly improving battery performance at both low and high temperatures. It is expected to contribute to society and the environment as an innovative material for automotive lithium-ion batteries. Recently, many innovative batteries using IONEL at high concentrations have appeared in reports; we are now entering a new world of high power and increased safety that was not possible with conventional lithium-ion batteries.

Sales volume for this product has steadily increased since it was introduced in fiscal 2014. For fiscal 2017, under our 2nd Medium-term Business Plan, we are planning to increase production in the range of several hundred tons. In anticipation of further expansion in fiscal 2020 and beyond, we are working to develop next-generation technology that will reduce the price of IONEL.

A Researcher Comments

I joined the company as someone who longed to be a part of the "Nippon Shokubai of Technology." My generation represents those who will develop these new technologies. By taking inspiration from the "soul of Nippon Shokubai" handed down by our predecessors, we intend to work together to expand the IONEL business to the full as we seek out all available opportunities for this product.

Shinpei Sato, Research Manager



Health and Medical Business

Establishing Our Drug Development Support Business

Social Issues

Many are aware that a long hard road extends between basic research and the launch of a new drug; this "Valley of Death" spans a lengthy period of time and consumes a large amount of funds. What's more, complicated laws and regulations must be complied with, adding to the burden. Even with a drug that holds much promise, the hurdles that await a drug discovery present many challenges that sometimes cannot be overcome.

Contributing to Society by Supporting Drug Discovery

We hope to contribute to society by bridging this "Valley of Death" in the field of peptide medicines, nucleic acid medicines, and DDS, which hold much promise for the future. Specifically, we are creating a Drug Development Support Business that provides consistent services in this area, from supporting the development of pharmaceutical innovations to manufacturing active pharmaceutical ingredients.

Currently, as one of our development support initiatives, we are engaging in partnerships with drug discovery start-up companies. At the same time, we are establishing a pharmaceutical synthesis laboratory in the Suita District in an effort to manufacture active pharmaceutical ingredients. We have also established a system for GMP compliance and have begun a process to synthesize active pharmaceutical ingredients for clinical trials.

A Researcher Comments

Initially, we were only a small group, but our members have gradually increased in number. We encounter new challenges every day as we collaborate with our business partners and joint research partners. When dealing with new discoveries, we aim to develop the process of synthesizing active pharmaceutical ingredients, manufacture these ingredients, and grow our drug development support business into a strong new core business. Through this effort, we hope to contribute to Japan's ongoing development of the biopharmaceutical industry.

Kirika Ueda, Researcher



Definitions

DDS (Drug Delivery System)

Technology that controls drug delivery and provides sustained release to affected areas

GMP (Good Manufacturing Practice)

Ensuring compliance with criteria for pharmaceutical manufacturing control and quality control

Profile of the Nippon Shokubai Group

Outline

Established	August 21, 1941
Common stock	¥25,000 million
Net sales	¥294,000 million (consolidated) ¥196,200 million (non-consolidated)
Number of employees	4,161 (consolidated) 2,207 (non-consolidated)
Osaka Office	Kogin Bldg., 4-1-1 Koraibashi, Chuo-ku, Osaka 541-0043, Japan TEL: +81-6-6223-9111 FAX: +81-6-6201-3716
Tokyo Office	Hibiya Dai Bldg., 1-2-2 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011, Japan TEL: +81-3-3506-7475 FAX: +81-3-3506-7598
Main Plants and Research Centers	Himeji Plant, Kawasaki Plant, Himeji Research Center, Suita Research Center (Main Plants and Research Centers as of April 1, 2017)

Major Product Lines

Environmental Products & Catalysts

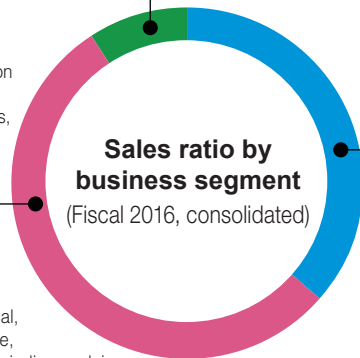
9.0%

Automotive catalysts, De-NOx catalysts, dioxins decomposition catalysts, process catalysts, exhaust gas treatment catalysts, materials for fuel cells

Functional Chemicals

54.4%

Superabsorbent polymers, intermediates for pharmaceutical, polymers for concrete admixture, electronic information materials, iodine, maleic anhydride, resins for adhesives, resins for paints, adhesive products



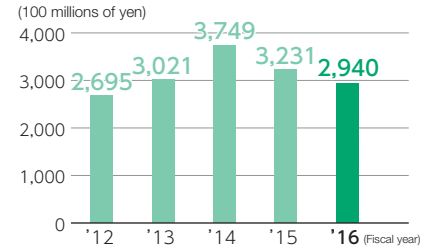
Basic Chemicals

36.6%

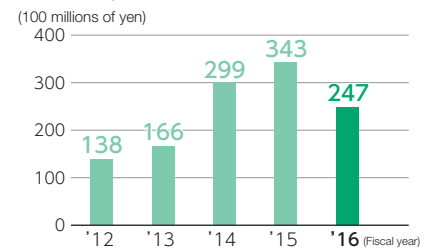
Acrylic acid, acrylates, ethylene oxide, ethylene glycol, ethanolamine, secondary alcohol ethoxylates

Financial Data

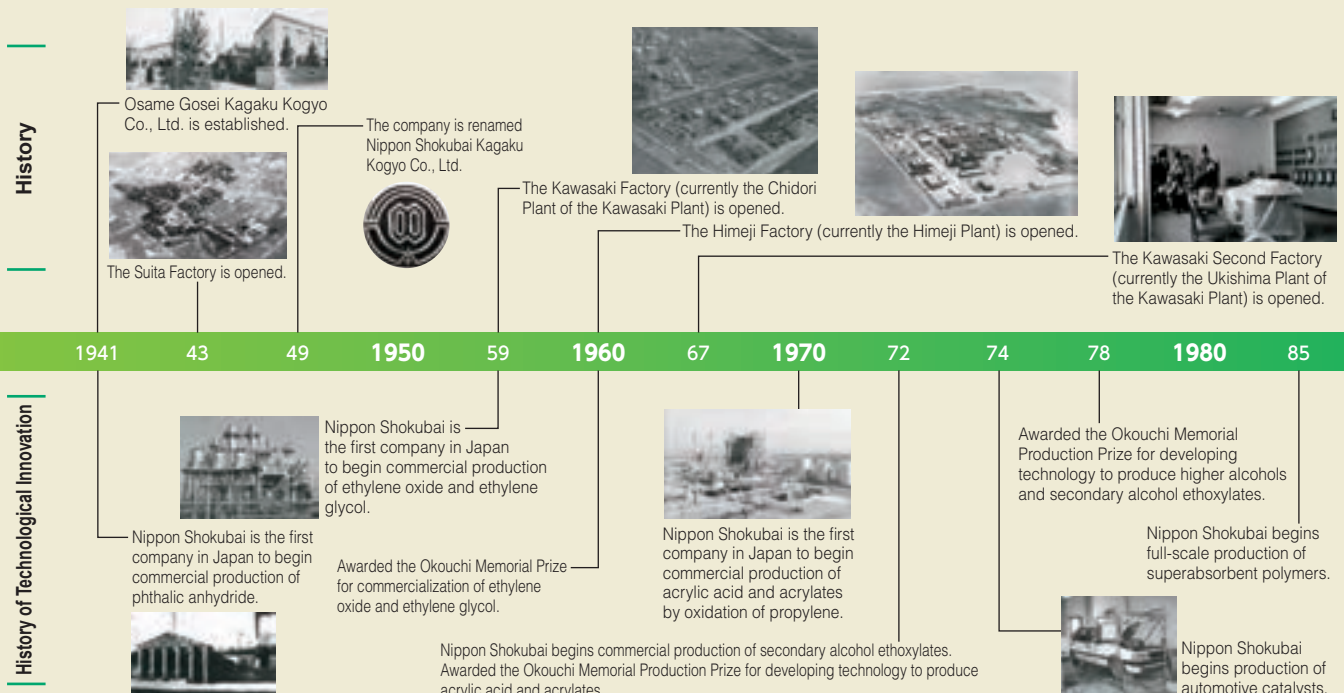
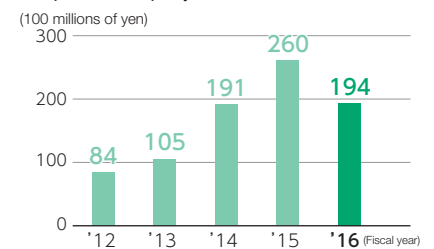
Net sales (consolidated)



Ordinary income (consolidated)



Current net income (consolidated) attributed to parent company as shareholder

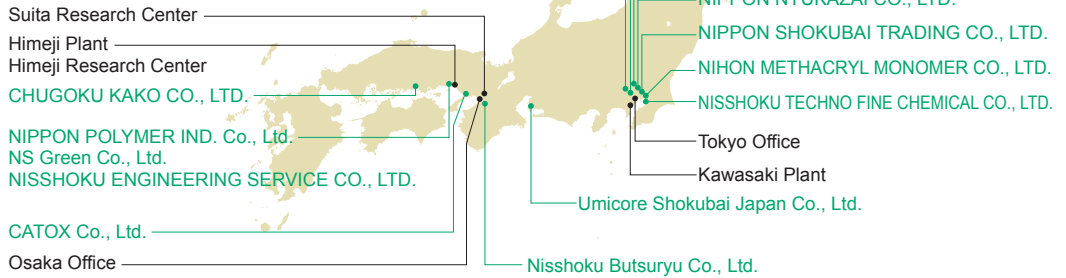


Business Locations

Together with its affiliates and trading companies, Nippon Shokubai has established a network encompassing the fields of chemicals, processing, and transportation in order to respond accurately to growing customer needs. Our Group was formed to ensure improved global production and a more effective supply chain (as of April 1, 2017).

Domestic Network

- Nippon Shokubai
- Affiliate



Global Network

- Affiliate

- 1 NIPPON SHOKUBAI EUROPE N.V.
- 2 Umicore Shokubai S.A.
- 3 LG MMA Corporation
- 4 NIPPON SHOKUBAI KOREA CO., LTD.
- 5 NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD.
- 6 NISSHOKU TRADING (SHANGHAI) CO., LTD.
- 7 SINO-JAPAN CHEMICAL CO., LTD.
- 8 SINGAPORE ACRYLIC PTE LTD
- 9 NIPPON SHOKUBAI (ASIA) PTE. LTD.
- 10 PT. NIPPON SHOKUBAI INDONESIA
- 11 American Acryl L.P.
- 12 American Acryl NA, LLC
- 13 Nippon Shokubai America Industries, Inc.
- 14 SIRRUS Inc.



1987: The Himeji Plant discontinues production of phthalic anhydride. The Himeji Plant installs gas turbine cogeneration facilities.
1988: Nippon Shokubai begins production of polymers for concrete admixture.
1990: The company is renamed NIPPON SHOKUBAI CO., LTD.
1991: PT. Nisshoku Tripolyta Acrylindo (currently PT. NIPPON SHOKUBAI INDONESIA) is established in Indonesia.
1996: NIPPON SHOKUBAI EUROPE N.V. is established in Belgium.
1999: NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD. is established in China.
2000: Singapore Acrylic Pte. Ltd. is established through a business swap with Sumitomo Chemical.
2003: The Kawasaki Plant introduces a new ethanalamine production process (with catalyst).
2004: Nippon Shokubai acquires majority of shares of NIPPON NYUKAZAI CO., LTD. and SINO-JAPAN CHEMICAL CO., LTD.
2006: Nippon Shokubai begins production of ACRYVIEWWA.
2008: Nippon Shokubai acquires majority of shares of NIPPON NYUKAZAI CO., LTD. and SINO-JAPAN CHEMICAL CO., LTD.
2009: Awarded the Okouchi Memorial Production Prize for new diethanolamine production technology.
2010: Awarded the Chemical Society of Japan Award for Technical Development for developing and industrializing ACRYVIEWWA.
2013: NIPPON SHOKUBAI (ASIA) PTE. LTD. merges with Singapore Glacial Acrylic Pte. Ltd.
2014: The Suita Plant is closed (R&D operations in the area are bolstered).
2015: Nippon Shokubai acquires SIRRUS Inc. as a subsidiary.
2017: Nippon Shokubai begins commercial production of IONEL electrolyte for lithium-ion batteries.

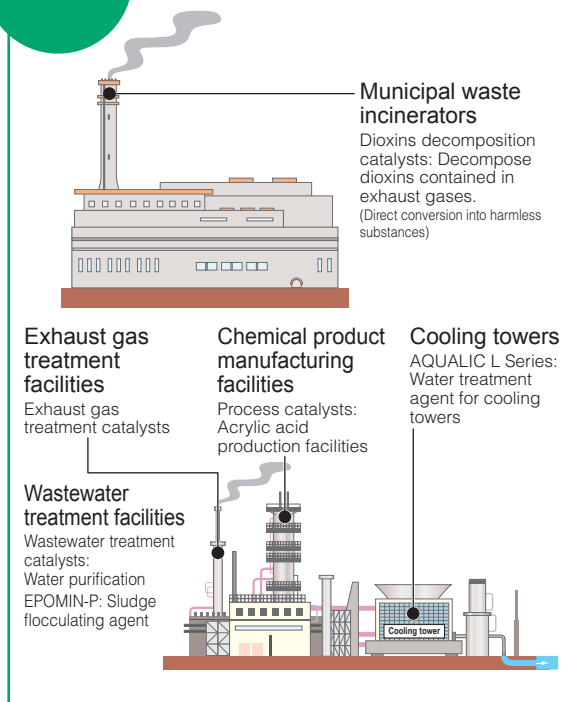
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Our Product Lines / Research & Development Highlights

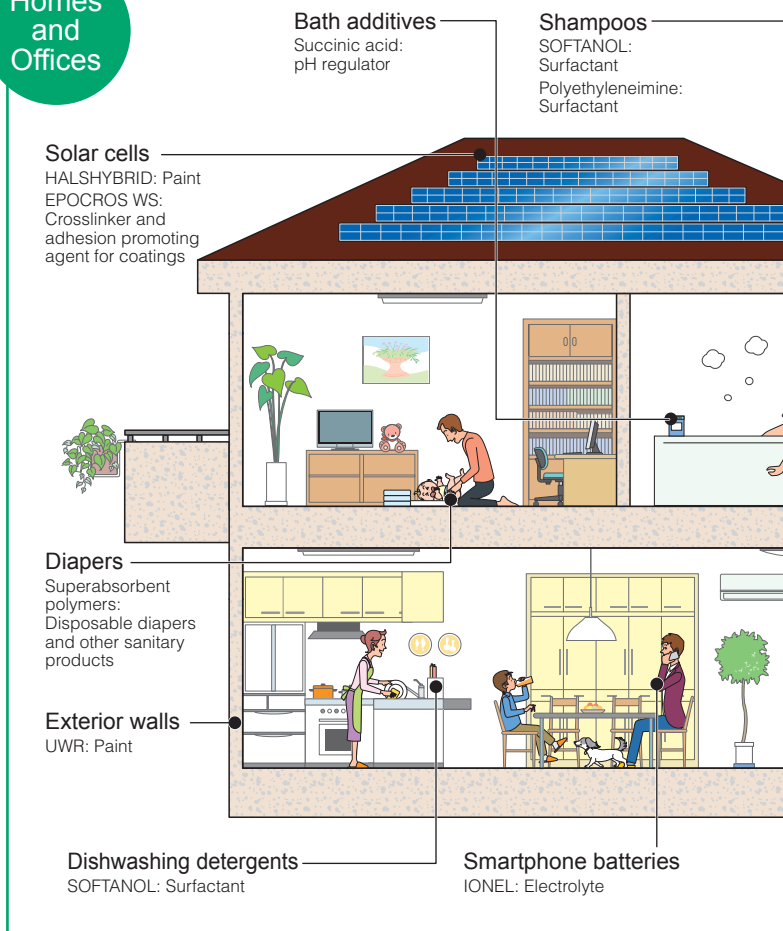
Our Product Lines

Our products and technologies contribute to an improved society and a better life in myriad industries.

Factories



Homes and Offices



Research & Development Highlights

Ion-Conducting Film (in development)

The ion-conducting film we have developed with our proprietary technology can be used as a battery separator. This material makes it possible to create a rechargeable battery from a zinc battery, which conventionally has been used only as a non-rechargeable cell.

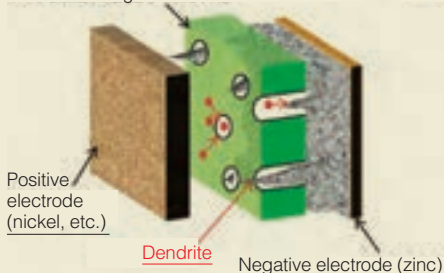
For example, nickel-zinc batteries and air-zinc batteries had been expected to emerge as next-generation rechargeable batteries because they have been considered very safe and eco-friendly, as they incorporate water-based electrolyte solution and contain no lead

or other harmful substances.

With conventional separators, however, the anode and cathode tend to short-circuit easily because the zinc active material forming the negative electrode generates dendrites during charging. This has caused major issues with battery life. Our ion-conducting film, however, effectively minimizes dendrite formation, resulting in a highly reliable rechargeable zinc battery.

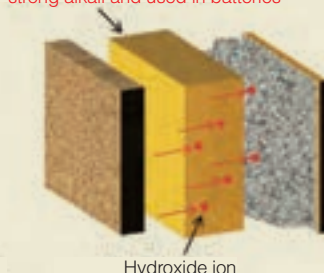
Conventional separator:

Ions flow through fine through-holes formed in the insulating film or nonwoven fabric.



Product in development:

An ion-conducting material stable in strong alkali and used in batteries



Laundry detergents
 SOFTANOL: Surfactant
 Ethylene oxide: Surfactant
 Ethanolamines: Synthetic detergent
 HIDS biodegradable chelating agent: Laundry detergent
 AQUALIC L Series: Builder for detergent

Displays
 ACRYVIEWA and resistant plastics for color filters:
 LCD TVs and smartphones

Structures

Large piers
 AQUALOC: Polymers for concrete admixture

Automobiles

Engine parts
 IMILEX-C & POLYIMILEX-PML:
 ABS resin and acrylic resin for head cover

Bumpers
 EPOCROS K:
 Paint

Automotive battery
 IONEL

Tires
 EPOCROS:
 Tire cord

Wheel covers
 POLYIMILEX-PSX:
 Heat-resistant nylon resin

Dashboard
 IMILEX-P & POLYIMILEX-PAS:
 Instrument panel
 EPOCROS:
 Dashboard and body adhesives

Exhaust pipe
 Automotive catalysts:
 Eliminate harmful substances from exhaust emissions.

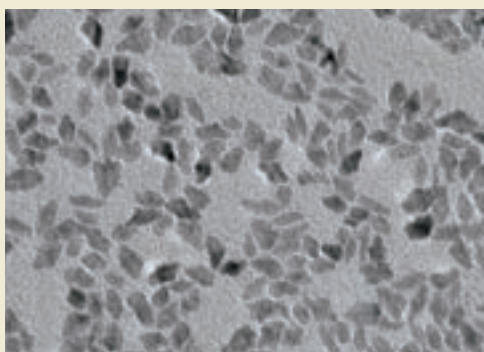
Chassis
 EPOCROS WS: Chassis
 ACRYSET: Vibration damping material for upper surface of chassis and sides

ZIRCOSTAR Dispersed Zirconia Nanoparticles*

The zirconia nanoparticles we developed with our proprietary technology exhibit good dispersion in a variety of organic solvents and resins. Resins in which these nanoparticles are dispersed demonstrate good optical characteristics (including high refractive index and high transparency), which are not possible with conventional materials. Materials incorporating ZIRCOSTAR

are most suitable for optical material and electronic material applications such as plastic lenses and displays. This product is especially suitable as a contributor to the energy-efficiency of portable devices such as smartphones and tablet PCs, contributing to extended operating time when battery-powered.

* Zirconium oxide whose particle size is maintained at nano scale (10^{-9} m)



Electron micrograph



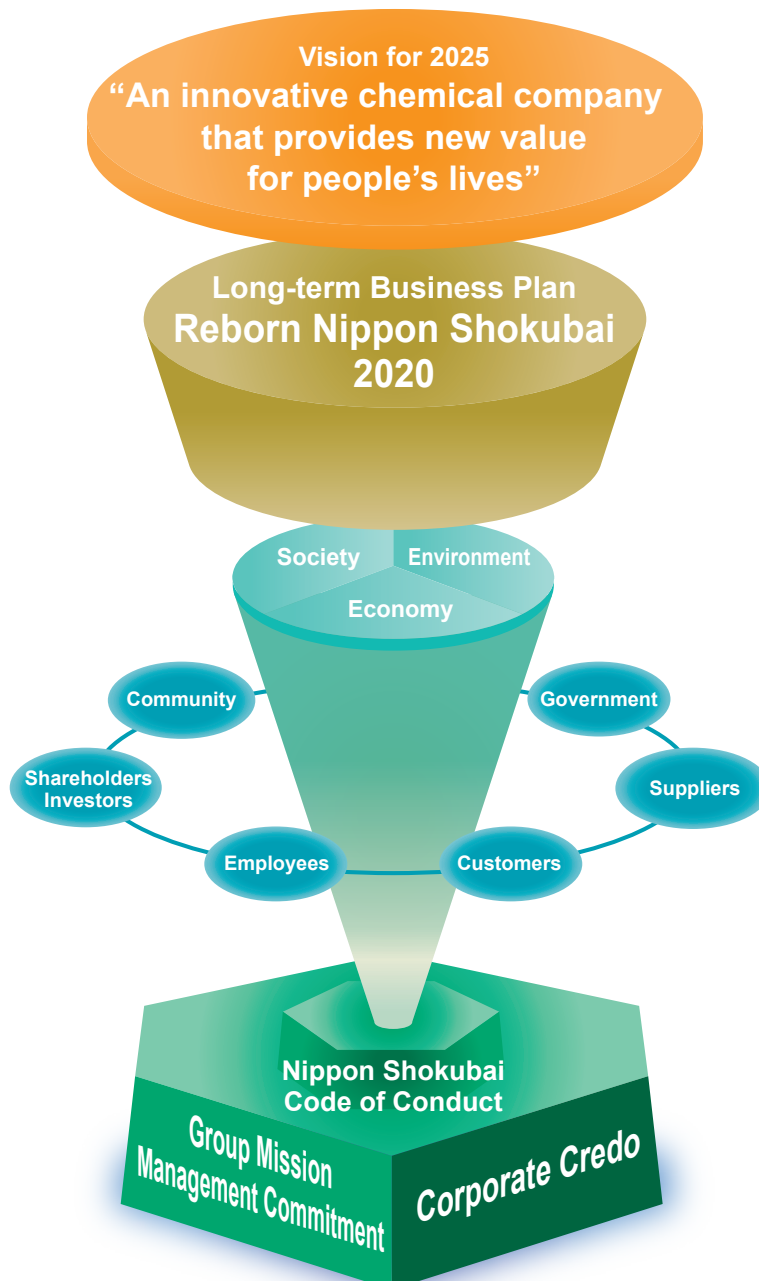
Dispersion in benzyl acrylate

Our Approach to Corporate Social Responsibility

CSR Concept

Nippon Shokubai has kept alive the spirit of our corporate credo, “Safety takes priority over production.” In accordance with our Group Mission of “**TechnoAmenity**,” we have established a Management Commitment and Code of Conduct to delineate our corporate behavior comprehensively from economic, social, and environmental perspectives, setting out corporate ethics, Responsible Care, risk management, human rights & labor, information disclosure, social contribution, and corporate governance as priority management issues. At the same time, we have been implementing initiatives to enhance our corporate value by maintaining dialogue with various stakeholders, including our customers, business partners, shareholders/investors, public administrators, employees, and local communities.

In keeping with our approach to corporate social responsibility (CSR), we will continue to contribute to the emergence of a sustainable society by implementing “Reborn Nippon Shokubai 2020,” our long-term business plan, with the goal of achieving our “Vision for 2025.”



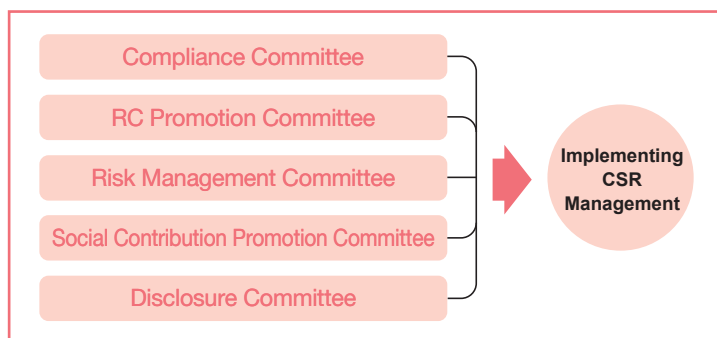
Formulation of CSR Medium-term Targets and Initiatives (2017–2020)

Under “Reborn Nippon Shokubai 2020 NEXT” (2017–2020), one priority issue that is intended to strengthen the company’s management foundation is to become “a company gaining further public trust as a responsible chemical company.”

Toward that end, we have highlighted the importance of promoting company-wide CSR activities; therefore, we have formulated CSR medium-term targets and initiatives spanning the same four years, envisioning this period as the age of the “Reborn Nippon Shokubai 2020 NEXT.”

In the years ahead, we will do our best to achieve our CSR medium-term targets and initiatives, and we will announce our achievements and progress in our annual CSR Reports.

CSR Implementation Structure



CSR Medium-term Targets and Initiatives

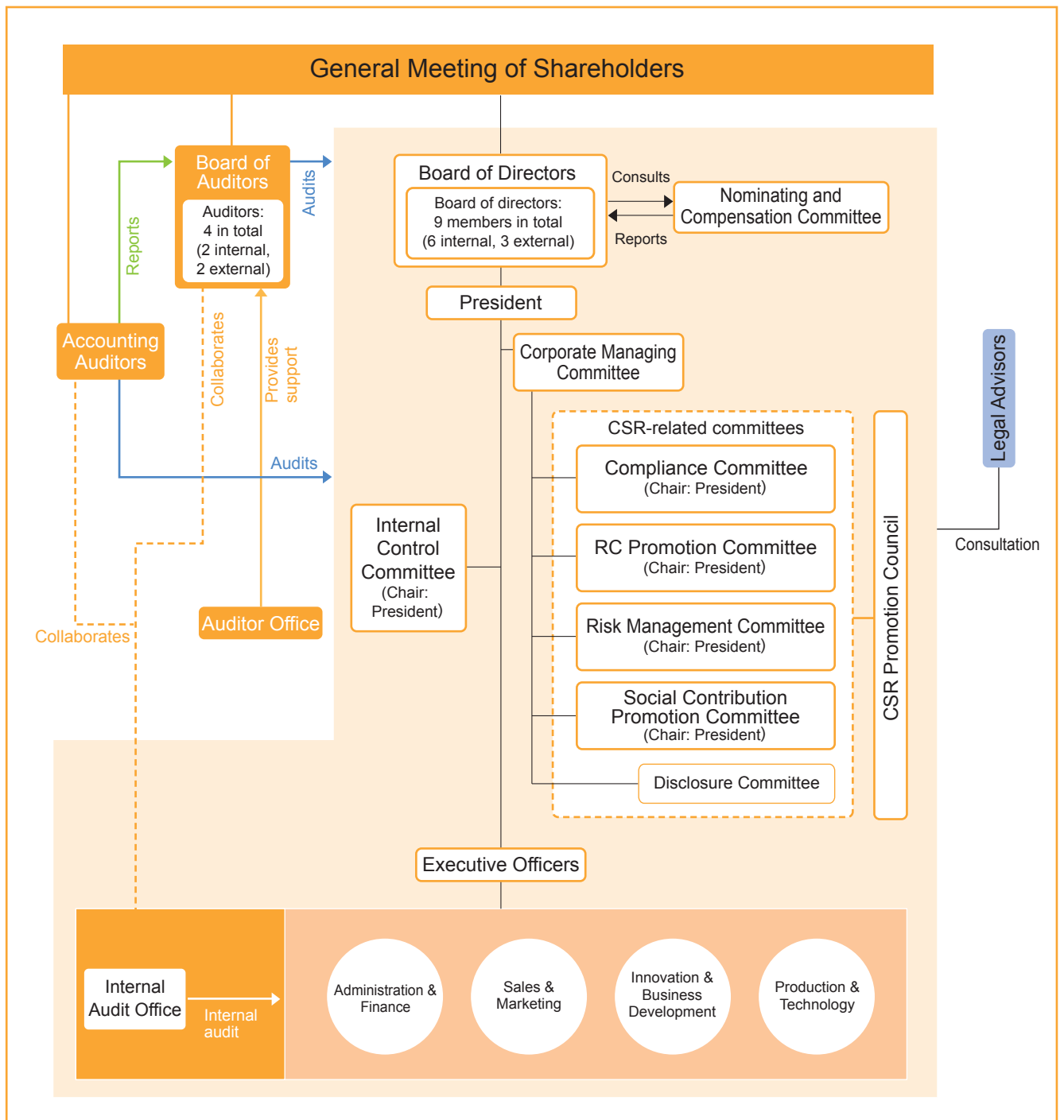
Stakeholder	Subject	Medium-term Targets & Initiatives
Company-wide	Corporate Ethics	To continue to emphasize corporate ethics while strengthening our regulatory compliance structure and enhancing various training programs
	Risk Management	To endeavor to expand our risk management while regularly analyzing risk, including undertaking a review of our current Business Continuity Plan
	Corporate Governance	To further strengthen and enhance corporate governance, including improving the functioning of the Board of Directors, in order to enhance corporate value and achieve sustainable growth
Environment	Environmental Protection	Preventing Global Warming 1) To reduce energy consumption by an amount equivalent to 8,000 kL of crude oil (over 4 years) 2) To reduce energy intensity by 5% from fiscal 2015 levels by fiscal 2020 3) To reduce fuel consumption intensity for road transport by 5% from fiscal 2015 levels by fiscal 2020; to promote modal shift
		Waste To maintain zero emissions (Quantity of final off-site landfill) ≤ (Total amount of waste generated × 0.1%)
		PRTR To reduce emissions of substances subject to the PRTR Law by 25% from fiscal 2015 levels by fiscal 2020
Customers	Quality Promotion of company-wide quality initiatives 1) To improve customer satisfaction 2) To attain more trust from customers 3) To achieve “Zero quality complaints”	
	Chemical Safety To achieve zero problems related to chemical safety (legal or social problems)	
Suppliers	Logistics Safety To achieve zero accidents and disasters related to logistics	
	Procurement To continue implementing green procurement	
Shareholders & Investors	Information Disclosure To continue to disclose information in accordance with our corporate governance code and to aim for more relevant responses in order to maintain high-quality constructive dialogue with shareholders and investors.	
Community	Social Contribution To enhance the social contribution initiatives of the Nippon Shokubai Group as a whole To formulate and implement the Third-term Plan (fiscal 2018–fiscal 2022) addressing our forest development initiatives	
	Process Safety and Disaster Prevention To achieve zero severe process safety accidents	
	RC Communication To promote dialogue on Responsible Care initiatives with local residents and implement appropriate information disclosure	
Employees	Human Resources To identify and train leaders who can lead the organization; to promote Diversity & Inclusion	
	Occupational Safety To achieve zero injuries with or without loss of workdays, including contractors	
	Occupational Health To provide all workers with a supportive and ideal work environment; to promote a healthy work-life balance	
Government	Collaboration To continue to cooperate with the administration through industrial associations and other avenues	

Corporate Governance

Under Nippon Shokubai Group’s Mission of **TechnoAmenity** — “Providing affluence and comfort to people and society, with our unique technology” — our goals are to emerge as an innovative chemical company that provides new value for people’s lives, to earn the greater confidence of the public as a responsible chemical company, and to become a company that all can take pride in, including our varied stakeholders. In this way we will increase our corporate value and achieve sustainable growth.

We consider the achievement of viable corporate governance as essential and have adopted initiatives toward that end: we are securing the rights and equality of shareholders and maintaining open dialogue; collaborating with various stakeholders as appropriate; disclosing information as appropriate and ensuring transparency; ensuring the roles of the board of directors and management teams related to their appropriate execution of duties; ensuring appropriate supervision of the execution of these duties; and strengthening and enhancing internal control systems.

Our Corporate Governance System (as of April 2017)



Roles and Functions of Various Bodies and Committees

Board of Directors
Comprising the nine members, including three external members, the board of directors supervises business operations of each director through reports, deliberations, and resolutions regarding important matters. In general, it convenes monthly under the chairmanship of a director selected from the members of the board who are not executive officers by a resolution of the board of directors. Four auditors — two external and two internal — also attend to give advice and state their opinions as appropriate when necessary.

Corporate Managing Committee
Comprising the president and executive officers appointed by the president, this committee generally convenes twice monthly (with all executive officers in attendance at one of these meetings) to deliberate items related to the implementation of basic policies and important management issues. In addition, regarding proposals discussed by the Corporate Managing Committee, important issues involving those proposals are forwarded to the board of directors for their consideration.

Board of Auditors
Comprising two external auditors and two internal auditors, this board convenes monthly in general, submits reports, and engages in discussions and deliberations on important matters.

Nominating and Compensation Committee
An advisory body of the board of directors, this is a voluntary organization comprising three or more members of the board of directors (including a majority of external directors). It advises on draft nominations of candidates for director and auditor positions and on compensation and bonuses for directors.

Internal Control Committee
Under the chairmanship of the president, this committee has established a system to ensure the reliability of financial reporting as enforced by the Financial Instruments and Exchange Act. It also seeks to process company operations more efficiently and effectively.

Compliance Committee
Chaired by the president, this committee addresses company-wide corporate ethics issues as well as compliance with laws and regulations.

RC Promotion Committee
Chaired by the president, this committee promotes the company's Responsible Care initiatives. It formulates the RC Promotion Basic Plan and focuses on further improving safety and quality while addressing environmental issues.

Risk Management Committee
Chaired by the president, this committee implements measures as appropriate in response to various wide-ranging risks to which our Group is exposed.

Social Contribution Promotion Committee
Chaired by the president, this committee promotes social contribution initiatives by focusing on further strengthening company-wide social contribution policy and by formulating annual, medium-term, and long-term activity plans.

Disclosure Committee
In order to contribute to management transparency and fulfill our social responsibilities while ensuring that all stakeholders have a better understanding of our company, this committee supports our efforts to disclose information on our company and affiliated companies fairly and appropriately and in a timely manner.

CSR Promotion Council
This council investigates and discusses issues related to our CSR, formulates plans, and organizes the progress of the various CSR-related committees.

Earning Public Trust and Contributing to Society | Corporate Ethics

Corporate Ethics

We remain committed to various group-wide initiatives intended to further improve and strengthen our corporate ethics and legal compliance systems.

Corporate Ethics Training

Rank-based training

We provide training and lecture sessions in corporate ethics targeted to three specific employee ranks: managerial employees, mid-level employees, and rank-and-file employees (including entrusted workers and dispatched workers from temporary agencies). We require all employees to attend such sessions at least once every three years.

In fiscal 2016, we held a total of 17 corporate ethics training sessions for mid-level employees, with more than 300 employees participating.

Beginning with the theme of "Considering Both Sides of Responsibility (Considering Approaches to Self-management)," we confirmed the importance of fulfilling our responsibility as leaders who are knowledgeable about a particular site by focusing on the original purpose of our business (such as research, development, manufacturing, or sales of high-quality products with a commitment to safety and security).

We then approached the theme of "Considering Both Sides of the Workplace Climate (Considering Approaches to Guiding Subordinates)." This concerned how to provide guidance to subordinates in day-to-day tasks. While clarifying the relationship between misconduct and corporate culture, we confirmed our stance

as a familiar and positive consultation partner capable of "drawing attention, knowing the background, addressing issues in a cool manner, and saying what one has to say." We have learned that such day-to-day words and actions help foster a good workplace culture.



Rank-based training

Awareness Initiatives in the Workplace

In order to promote greater penetration and adoption of corporate ethics in the workplace, we conduct corporate ethics training sessions in various workplaces once every six months. These training sessions have become well established, as they offer opportunities for workplace discussion. They are based on a training program covering violations of corporate ethics and legal violations and the like that we created in reference to situations that actually arose in other companies.



Workplace training



Workplace training

The “Nippon Shokubai Group Corporate Ethics Guidebook” Published for Affiliates in Japan

In 2007, we published the “Nippon Shokubai Corporate Ethics Guidebook” as a means of presenting the specific conduct guidelines contained within the Nippon Shokubai Code of Conduct. This publication is distributed to all employees as part of our awareness-raising initiative while allowing for appropriate revisions as the need arises.

In order to promote greater Group-wide penetration of the Nippon Shokubai Group Mission “**TechnoAmenity**— Providing affluence and comfort to people and society, with our unique technology,” we published the “Nippon Shokubai Group Corporate Ethics Guidebook” for our companies in Japan and distributed it to all their employees. This publication contains conduct guidelines, explanations, and frequently asked questions on practices to follow not only in routine tasks but also in private life. Its content is useful for raising the awareness of each employee regarding corporate ethics.



Nippon Shokubai Corporate Ethics Guidebook



Nippon Shokubai Group Corporate Ethics Guidebook

Awareness Activities on Our Corporate Ethics Portal

Our corporate intranet hosts our corporate ethics portal titled “Understandable Corporate Ethics.” It lists basic information on contracts, competition laws in various countries, observance of anti-bribery laws, various manuals related to subcontract law and the like, links to websites covering related laws and regulations, and a FAQ page. This site presents the latest available information, as it is updated as necessary whenever the relevant laws and regulations are revised.



Web portal

In Focus

Pro Golfer Shoko Sasaki Signs Affiliation Contract with Nippon Shokubai.

In February 2016, we signed a sponsorship contract with the Pro Golfer Shoko Sasaki, and in November that same year we signed an affiliation contract in support of this talented golfer. In July 2016, Ms. Sasaki posted a win in only her first year on the pro tour. She also garnered several Rookie of the Year awards at the end of that year, which has focused considerable attention on this talented athlete. We invite you to visit the Nippon Shokubai Report on Shoko Sasaki, a web page that contains Ms. Sasaki’s personal profile and professional accomplishments (in Japanese).

Website: <http://www.shokubai.co.jp/ja/sasaki/index.html>

Pro golfer Shoko Sasaki



Our Policy to Promote Constructive Dialogue with Shareholders and Investors

As a basic policy of our approach to IR, we undertake fair and timely information disclosure and release clear and accurate information. We strive to promote constructive dialogue with our shareholders and investors in order to contribute to the sustained growth of our company and enhancement of our medium- and long-term corporate value.

Promoting Constructive Dialogue with Shareholders and Investors

We are implementing the following initiatives to promote constructive dialogue with shareholders and investors.

Initiative	Content
General meeting of shareholders	<ol style="list-style-type: none"> 1. We use visual techniques when reporting our management review and when deliberating proposals during the general meeting of shareholders, as this enables shareholders to develop a deeper understanding. In addition, we hold a shareholder round-table meeting after the annual general meeting of shareholders to promote smooth communication between management and shareholders. 2. For the convocation notice of the general meeting of shareholders, we include graphs and illustrations for clarity and understanding. 3. To enable many more shareholders to attend our annual general meeting of shareholders, we schedule our meeting about one week before the day on which many other Japanese companies tend to hold their shareholders' meetings.
IR meeting for individual investors	We hold an IR meeting for individual investors (irregular, aiming for once annually).
Presentations for analysts and institutional investors	We hold IR meetings for analysts and institutional investors, and we disclose information on our full-year and first-half financial results for the fiscal year as it is released.
IR meeting for offshore investors	We hold IR meetings for offshore investors on an irregular basis.
Publication of IR data on website	Our website lists financial results and other disclosure materials; annual securities reports and quarterly reports; convocation notices for the annual general meeting of shareholders; notices of resolutions; business reports; IR meeting materials; and other presentation materials on a timely basis. In addition, we follow a fixed schedule for posting English-language translations of the briefing materials of our annual and quarterly financial results; convocation notices for our annual general meeting of shareholders; IR meeting materials; and the English-language edition of our Annual Report.
Others	For shareholders, we send out our Business Report in June and December.



Annual Report 2016



104th Business Report

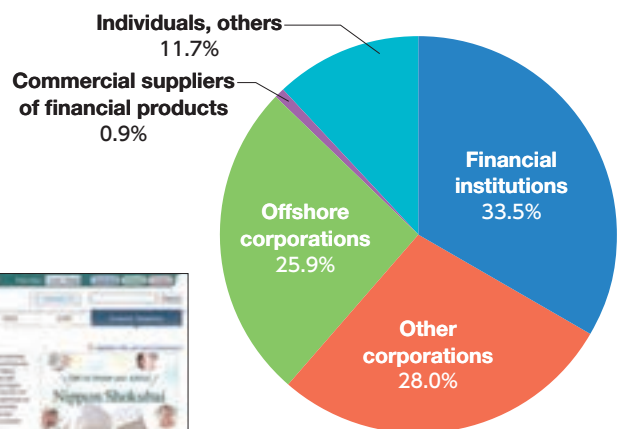


IR meeting



Website

Distribution Breakdown (as of March 31, 2017)



In keeping with our policy on social contribution initiatives, we are promoting practices that complement our Management Commitment to coexist with society and maintain harmony with the environment.

Our Policy on Social Contribution Initiatives

Guided by the Nippon Shokubai Group Mission of “**TechnoAmenity**,” we have adopted a number of social initiatives. These include maintaining clear and open communication with the public as a good corporate citizen that protects the natural environment, works in harmony with local communities, and trains the next generation.

Protecting the Natural Environment

Forest Development Initiatives

In order to minimize global warming and preserve biodiversity, our employees have volunteered to protect and restore the natural environment. Through these initiatives, we aim to train individuals who can think independently and take action on the environment.

Contributing to Our Forests and Water Resources

Location: Akasai Valley, Hara, Haga-cho, Shiso-shi, Hyogo prefecture
 Activities: Forest improvement, river biological surveys, and other activities
 Start of activity: November 2008

In order to improve conservation of the headwater forest in the Akasai Valley that serves as the headwaters of the Ibo River, we have been performing maintenance work to leave a beautiful forest for future generations. In addition, we are learning to impart the importance of protecting biodiversity through our research on the creatures inhabiting the Akasai River.

In May, August, and October of fiscal 2016, we undertook three initiatives. Our August activity included collaborating with professors and students of a university on a survey of creatures and the water quality of the river.



Biological survey on Akasai River

Contributing to the “Yugawara Myriad Leaves Forest”

Location: Kajiya, Yugawara-machi, Ashigarashimo-gun, Kanagawa prefecture
 Activities: Forest improvement, nature observation tours, and other activities
 Start of activity: November 2013

In the headwater forest of upper reaches of the Shinzaki River in Yugawara-machi, we conduct forest improvement and nature observation tours. Local residents participate and collaborate with us to create an opportunity for learning about the natural environment.

In May and October of fiscal 2016, we undertook two initiatives. In autumn, we worked with the residents of Yugawara-machi to plant trees and make benches.



Group photo of participants

Japan-China Friendship Forest Development and Global Warming Prevention

Location: Ejin Horo Banner, Inner Mongolia Autonomous Region, China
 Activities: Afforestation, maintenance, management, and the like
 Start of activity: October 2008

As part of a project to prevent desertification in inland China, we have been engaged in initiatives to restore forest throughout the area where it once existed. Every year, we return to this area to plant trees.

In September of fiscal 2016, we undertook a tour, working on tree planting together with local university students. We planted about 100 seedlings.



Tree planting project in China

Note: The forest development initiatives of Nippon Shokubai are undertaken in cooperation with NPOs through the Green Fund of the National Land Afforestation Promotion Organization.

Conserving and Popularizing the *Nojigiku* Chrysanthemum

In order to protect, conserve, and popularize the endangered *nojigiku* chrysanthemum, the prefectural flower of Hyogo, our Himeji Plant has cultivated 160 varieties of this flower, including foundation stock, in a 2,000-square-meter green yard by the plant.

Cultivation began in 1972 and by 1974 the Himeji Plant began distributing seedlings annually in cooperation with Hyogo prefectural government.

In fiscal 2016, we distributed 27,000 seedlings to 268 organizations, including local governments, kindergartens, elementary and junior high schools, and community associations.



Nojigiku in a conservation garden

Working in Harmony with Local Communities

Cleanup Campaign

We conduct periodic cleanups of the environs around all our plants as a local beautification initiative.

Four times a year, employees at our Kawasaki Plant collect garbage and pick weeds along the roads and sidewalks around the plant.



Clean-up at the Kawasaki Plant

Sweet Potato Harvest Party

We grow sweet potatoes in the potato fields we have created in the green yard of the Himeji Plant. Every year, we invite neighborhood kindergartners and nursery school children to enjoy harvesting our crop of sweet potatoes. We have been holding this activity since 1971, as it has helped us forge strong ties in the community. In fact, some of the children who harvested potatoes in the past are now employed with us.

In fiscal 2016, about 800 preschoolers and their parents took part.



Children harvest potatoes

Training the Next Generation

Children's Chemistry Experiment Show

For the children who will form the next generation (mainly elementary and junior high school students), we have been presenting an Experiment Show titled "Superabsorbent Polymer, the Mysterious Powder." The children enjoy experimenting with chemistry and take great interest. In fiscal 2016, we held shows at the following venues.

Sakurayama Park Festival/Science Booth Exhibit

Date: July 23–24, 2016

Site and Sponsor:

Himeji City Science Museum

Participants: 280

Children's Chemistry Experiment Show 2016

Date: October 22–23, 2016

Site: Kyocera Dome Osaka

Sponsor: "Dream Chemistry 21" Committee

Participants: 330



Science Booth Exhibit

Hosting Internship Trainees

Our Himeji and Kawasaki Plants and our Suita Research Center provide internship opportunities that offer training for students from technical colleges.

In fiscal 2016, a total of 24 students from 20 colleges gained experience and skills — such as how to take measurements with analytical instruments — through this program.



Internship

Under our Management Commitment to conduct all corporate activities with a deep respect for humanity, we strive to provide and maintain a positive work environment while facilitating a high level of job satisfaction for every employee.

An Environment that Contributes to Job Satisfaction

By implementing the long-term business plan we have titled “Reborn Nippon Shokubai 2020,” we seek to revitalize our employees and our organization as the foundation for the continuous growth of our Group. We are training our employees to become independent personnel who can exert their best efforts and achieve results in order to create “a company that we can be proud to work for” while striving to design and manage a system framework that allows our employees to demonstrate their abilities.

Moreover, by adhering to the ideal of encouraging each individual employee to “Think & Act” — in other words, to determine his or her own way forward and take action — we are developing a variety of company-wide initiatives intended to reform our corporate culture.

Human Resources Management System

We have introduced a human resources management system based on management by objectives, which is applicable to all employees. After a given period of time, we will introduce an improved environment in which employees can achieve significant results by working with independence as a result of ongoing reviews of our system and our operational environment.

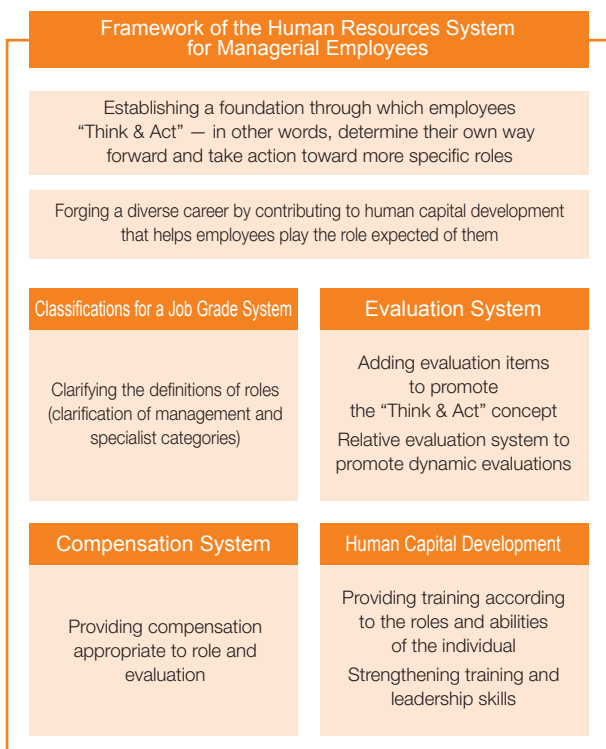
1. Provisions for Managerial Employees

In April 2016, we revised the human resources system for managerial employees that had been in place for 16 years. Managerial employees are the drivers behind what needs to be accomplished under our medium- and long-term business plans and our “Vision for 2025.” Because these managerial employees are motivated by the concept of “Think & Act,” meaning “always being conscious of one’s accountability in order to maximize value for the customer,” this system is designed to reward those who demonstrate their best efforts at fulfilling their roles.

2. Provisions for Non-managerial Employees

We remain committed to a variety of efforts to continually maintain the current system. To ensure we set more challenging and more ambitious goals, we are conducting more study and are implementing policies in addition to providing evaluator training to ensure the fairness of employee evaluations.

Framework of the Human Resources System for Managerial Employees



Human Capital Development

We have listed the following four items as “personnel objectives” in order to cultivate leaders who take the initiative and assume responsibility for a task without leaving it to others to perform.

- Self-starting personnel capable of taking the initiative in identifying and resolving issues
- Personnel capable of flexibly adapting themselves and their organizations
- Personnel capable of demonstrating sophisticated expertise
- Personnel capable of working with a diverse international community

We provide opportunities for our employees to develop the abilities they require. When an employee independently acquires the necessary abilities and a variety of skills, future value is generated for both the company and the individual employee.

Under this arrangement, we provide participatory applicant-type “self-directed training” in addition to carrying out rank-based training that employees participate in at each step of their careers. We have also established a system to help all employees proactively develop the skills that suit them by offering English-language training, a system for overseas study, distance learning, and assistance in acquiring qualifications and the like.

Human Resources Development Support System



Interview

After I underwent self-directed training

I took these two courses because it became clear that I needed to acquire not only an understanding of English but also the ability to use it in a practical sense. In addition, I thought it would enable me to learn systematically how to train those junior to me.

When one is in training, knowledge can be gained through practical exercise in addition to lectures, and the nature of what one learns can be used in a variety of ways in one's work. I feel that this approach to training reinforces the required knowledge and ability, which is a significant system that enables one to develop personal skills with a subjective aspect.

In the future, I would like to take further advantage of such self-directed training in a systematic manner for my own personal growth.

Hiroyuki Kawai Production Planning & Administration Center, Himeji Plant



Diversity in Human Resources

1. Promoting Female Employees

Our company has been working actively to ensure gender-neutral recruitment and institutional development.

We have formulated an action plan for fiscal 2016–2020 that is intended to increase the number of female employees in managerial positions (or above the level of section manager class). Our goal is to double the number relative to the fiscal 2015 year-end levels by the end of fiscal 2020.

2. Employment of Foreign Nationals

In anticipation of further expansion of our business across the globe, we continue to hire foreign nationals in Japan as well as in our group companies in other countries.

3. Re-employment System

This system corresponds to measures addressing the rescheduling of pension eligibility age and is intended to help stabilize the lives of retired employees. The period of re-employment extends until the age of 65. This initiative contributes to an employee's sense of security, self-worth, job satisfaction and motivation, as it provides ongoing employment in a familiar work environment.

Note: Re-employment rate of retired employees: 81.6% (FY2016)

4. Employment of People with Disabilities

We are committed to our employment of people with disabilities and giving them active roles at each of our workplaces and at our designated Group subsidiary, NS Green Co., Ltd.

An Ideal Working Environment

In an effort to provide our employees with the opportunity to achieve “the good life,” we offer a wide-ranging employee welfare system for the benefit of our employees and their families. This initiative includes wealth building, emergency preparedness, support for daily life activities, planning for a stable retirement, fruitful use of personal time, and maintenance of health and wellness. Our company will continue to support “the good life” for our employees through self-help as we enter the era of a low birth rate and an aging population.

Creating a Space for Communication

We promote a good work-life balance by creating an environment in which everyone can work in comfort. As part of this effort, we conduct a variety of events that provide opportunities for employees and their families to interact.



Ski tour held as an employee welfare event



Inter-departmental Sports Competition

Managing Mental and Physical Health

In order to maintain and improve the mental and physical health of employees, we are promoting various measures concerning health management and promotion. Conducted by our industrial physicians and occupational health staff, this effort revolves around the health promotion office in each of our business offices. Specifically, we conduct general and specialized health examinations and provide tailored health advice in cooperation with the Nippon Shokubai Health Insurance Union. Together, we arrange health checkups with dentists in addition to family checkups and the like. We also offer educational activities such as in-house lectures and physical strength measurement sessions.



In-house lecture



Physical fitness session

Regarding mental health, we have formulated a Mental Health Plan aimed at preventing mental and physical illnesses beforehand. At the same time, we strive to achieve productivity improvements and create a bright and lively workplace by providing stress checks and rank-based training and the like focused on mental health education for all employees.

Providing Balanced Assistance for Work, Child Care and Nursing Care

Japan's low birth rate and aging population remain pressing issues; therefore, it is essential that all sectors of society continue to support child care and nursing care. Private enterprises are also required to create an environment that supports a balance among work, child care, and nursing care. We are responding to these social realities by striving to create an environment and infrastructure that provides a variety of systems for supporting employees with their parenting and nursing responsibilities while employed. We also published a guidebook that summarizes our balanced support system, and we continue to keep our employees broadly informed and educated.

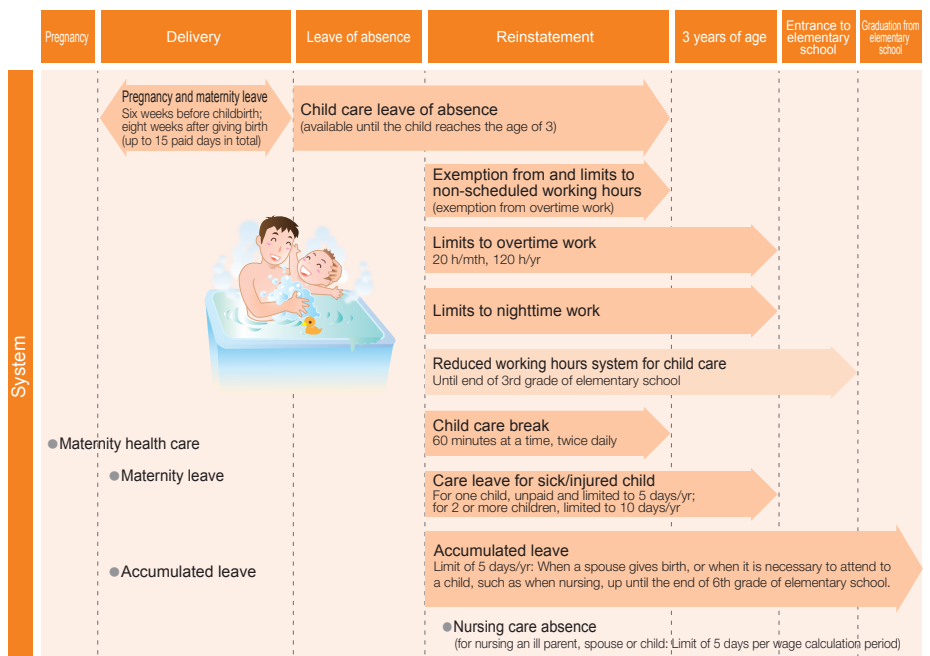
The Osaka Labour Bureau of the Ministry of Health, Labour and Welfare granted us an authorization for complying with Standards for General Employers under the Next Generation Nurturing Support Measures Promotion Law.



Providing Balanced Assistance for Work and Nursing Care

Leave of absence	Balanced assistance for work and nursing care
Nursing care leave Any period of up to 365 consecutive days in total	Exemption from and limits to non-scheduled working hours
	Limits to overtime work 20 h/mth, 120 h/yr
	Limits to nighttime work
	Reduced working hours for nursing care Scheduled working hours reduced to 6 h/day
	Nursing care leave Up to 5 days/yr for one person, up to 10 days/yr for 2 persons or more
	Accumulated leave When taking a leave of absence of more than 5 consecutive calendar days. However, may also be used for up to 5 days per year on a day-to-day basis.
	● Nursing care absence (for nursing an ill parent, spouse or child; Limit of 5 days per wage calculation period)

Providing Balanced Assistance for Work and Child Care



Notes: Number of employees using child care leave of absence: 25 (Total number of employees for fiscal 2016)
Number of employees using reduced working hours system for child care: 210 (Total number of employees for fiscal 2016)

Toward a Sound Labor-Management Relationship Based on Mutual Respect

Nippon Shokubai and the Nippon Shokubai Labor Union, a member of the Japanese Federation of Energy and Chemistry Workers Unions, maintain a dialogue based on mutual respect. Through our good labor-management relationship based on mutual understanding and trust, we are addressing the resolution of various issues and achievement of goals through cooperation. Under the union shop agreement, all our employees — except for managerial employees — are required to join the union.

All companies in the chemical industry responsible for handling various chemical substances voluntarily agree to protect the environment and human health and safety in all processes ranging from the development of chemical substances to their manufacture, distribution, use, end consumption, disposal, and recycling. The results of these activities are publicly disclosed and the companies engage in dialogue and communication initiatives with the public. This effort is part of the initiative known as Responsible Care (RC). The RC Global Charter was developed in 2006 and revised in 2014 by the International Council of Chemical Associations (ICCA), which promotes Responsible Care worldwide.

Nippon Shokubai has participated in the Japan Responsible Care Council (JRCC; currently known as the Japan Chemical Industry Association Responsible Care Committee) since it was established in 1995. We actively promote Responsible Care by focusing on our main pillars: environmental protection; process safety and disaster prevention; occupational safety and health; chemical safety; quality; and communication with society.

We are determined to continue contributing to society while fulfilling our corporate social responsibility through our group-wide commitment to Responsible Care.



President's signature on the RC Global Charter (Revised 2014 version)

RC Policy

In conformity with the Nippon Shokubai Group Mission, Management Commitment, Corporate Credo, and the Nippon Shokubai Code of Conduct, we rank it as an important management measure to provide products and technologies that contribute to society and environmental protection. In addition, while paying due respect to the principle of Sustainable Development, we are determined to conduct all activities in accordance with the following policy related to environmental protection, safety, and product quality that will bring our business operations into harmony with the global environment.

We will implement this RC Policy in all our business operations by ensuring all employees have a thorough understanding and awareness of its importance. The president shall be the person with the ultimate responsibility for implementing this policy.

1

Aim at environmental protection and reduction of negative environmental impact throughout the entire life cycle of a product, from development to disposal.

2

Ensure the safety of our employees and our communities by targeting zero accidents and zero disasters with a commitment to the principle "Safety takes priority over production."

3

Confirm the safety of chemical materials, intermediates and products, and consider the health of our customers, employees of our logistics subcontractors, our employees, and others.

4

Stably supply products and associated services that meet customer satisfaction and inspire their trust.

5

Publicly announce the results of these activities and make an effort to communicate for proper understanding.

RC Promotion Organization

The president is chairman of the RC Promotion Committee, and technical committees and sub-committees are established to promote company-wide Responsible Care activities.



Message from the President
The 2nd Medium-Term Business Plan: "Reborn Nippon Shokubai 2020 NEXT"
Special Feature
Creating Value through R&D
Profile of the
Nippon Shokubai Group
Our Product Lines / Research & Development Highlights
Our Approach to Corporate Social Responsibility
Corporate Governance
Earning Public Trust and Contributing to Society
Responsible Care Activities

9th Medium-term Responsible Care Basic Plan (Fiscal 2014–2016) and Results

In fiscal 2014, we formulated our 9th Medium-term Responsible Care Basic Plan as a three-year plan commencing in April 2014. As a continuation of our 8th plan, this plan enhanced our initiatives to eliminate facility disasters, facility accidents, and occupational accidents. In addition, we maintained our environmental impact reduction initiatives in the interests of sustainable development, and we continued to implement the priority initiatives intended to improve customer satisfaction and meet customer needs for functional products and the like. Moreover, we continued to enhance our comprehensive chemical management system.

Evaluation: 😊 Achieved 😊 Partially Achieved 😞 Not Achieved



Environmental Protection



Objectives for Fiscal 2014–2016

- To reduce energy intensity by 25% from fiscal 1990 levels (96.2 L/t)
- To maintain zero emissions¹
- Emissions of substances subject to the PRTR Law: To reduce by 20% from fiscal 2010 levels (Fiscal 2016 level: 90.8 t/y)

Results for Fiscal 2016

- Energy intensity reduced by 20%.
- Zero emissions achieved and maintained.
- Emissions of substances subject to the PRTR Law: 14% reduction

Priority Initiatives

To promote continuous improvement through our environmental management system

- 1) To promote energy conservation initiatives and technical reviews in order to reduce waste and release of PRTR-controlled chemical substances
- 2) To promote development of technology to reduce CO₂ emissions by improving process catalyst and utilization of plant-derived raw materials
- 3) To evaluate by means of c-LCA² how all our products contribute to the avoidance of CO₂ emissions throughout their life cycles and publicly disclose the reductions achieved



Process Safety and Disaster Prevention



Objectives for Fiscal 2014–2016

- Zero disasters • Zero accidents

Results for Fiscal 2016

- Zero disasters occurred. • One accident occurred.

Priority Initiatives

In the wake of the accident, we will improve our process safety capabilities by fostering a culture of safety and operating our process safety management system with diligence.

- 1) To conduct thorough risk assessments
- 2) To reduce risk by collecting and sharing safety technical information (including information on internal and external accidents and hazardous substance risk)
- 3) To enhance education and training
- 4) To strengthen the "safety first" mindset
- 5) To strengthen the inspection system related to process safety
- 6) To promote earthquake response measures and measures for aging facilities
- 7) To strengthen the support system for logistics safety



Occupational Safety and Health



Objectives for Fiscal 2014–2016

- Zero injuries with loss of workdays³ (including contractors)
- Zero injuries without loss of workdays⁴ (including contractors)

Results for Fiscal 2016

- Two injuries with loss of workdays occurred.
- Eleven injuries without loss of workdays occurred.

Priority Initiatives

To foster a safety culture and promote continuous improvement through the Occupational Safety and Health Management System

- 1) To conduct thorough risk assessments
- 2) To reduce risk by collecting and sharing safety technical information (including information on internal and external accidents and hazardous substance risk)
- 3) To improve knowledge and sensitivity to risk prediction through enhanced education and training
- 4) To strengthen the "safety first" mindset
- 5) To enhance support for safety initiatives among our contractors

Definitions

¹ Zero emissions: Reducing the quantity of waste subject to final disposal at off-site landfills to less than 0.1% of the total amount of waste generated (In the calculation of total waste, the amount of sludge subject to activated sludge treatment is calculated before dehydration.)

² c-LCA (carbon-Life-Cycle Analysis): A method of assessing greenhouse gas emissions throughout the life cycle of a finished product incorporating chemical products and a comparison product containing no such chemical products when used by consumers and in other industries. The evaluation method calculates a chemical product's net contribution to GHG emissions reduction by determining the increased emissions when no such chemical product is used.

³ Injury with loss of workdays: Injury requiring at least one lost workday for medical treatment

⁴ Injury without loss of workdays: Injury requiring no loss of workdays for medical treatment

⁵ Quality nonconformities: Involving a minimum loss of ¥1 million

⁶ Refers to Group companies inside and outside Japan, unless otherwise specified.

⁷ The period covered by Group companies outside Japan is January 1, 2016–March 31, 2017 (excludes Environmental Protection).



Chemical Safety



Objectives for Fiscal 2014–2016

- Zero problems related to chemical safety (legal or social problems)

Results for Fiscal 2016

- Zero problems related to chemical safety occurred.

Priority Initiatives

- 1) To collect, share, and effectively apply information on hazardous substance risk
- 2) To improve the function of the chemical substance management system through central management of the information
- 3) To appropriately comply with the laws and regulations on chemical substances both inside and outside Japan (by collecting information on laws and regulations, keeping our employees informed, and providing information to our Group companies both inside and outside Japan)
- 4) To promote Global Product Stewardship (GPS) (by participating in the Japan Initiative of Product Stewardship (JIPS) launched by the Japan Chemical Industry Association)



Quality



Objectives for Fiscal 2014–2016

- Zero serious customer complaints • Zero quality nonconformities⁵

Results for Fiscal 2016

- Zero serious customer complaints were filed. • Five quality nonconformities were discovered.

Priority Initiatives

- 1) To promote initiatives to prevent quality issues and complaints
- 2) To strengthen the quality assurance system for functional products and products of new businesses
- 3) To strengthen the quality assurance initiatives of Group companies in Japan
- 4) To strengthen the quality assurance system of locations outside Japan
- 5) To conduct continuous quality training and raise awareness



Communication with Society



Objectives for Fiscal 2014–2016

- To maintain a dialogue with stakeholders and implement reasonable information disclosure

Results for Fiscal 2016

- Participated in community dialogue. • Issued CSR Report.

Priority Initiatives

- 1) To participate actively in RC community dialogue meetings and community social activities
- 2) To disclose the status of RC initiatives to stakeholders through the company website and the CSR Report



Developing RC among Our Group Companies⁶ (Measures Common to Our Group Companies)



Objectives for Fiscal 2014–2016

- (1) Environmental Protection
 - To reduce energy intensity
 - To reduce disposal at off-site landfills (Group companies in Japan)
 - To reduce the amount of waste (Group companies outside Japan)
 - To reduce emissions of substances subject to the PRTR Law
- (2) Process Safety and Disaster Prevention: To achieve zero disasters and zero accidents
- (3) Occupational Safety and Health: To achieve zero injuries with loss of workdays
- (4) Chemical Safety: To achieve zero problems related to chemical safety (legal or social problems)
- (5) Quality: To receive zero serious quality complaints
- (6) Communication with Society: To maintain a dialogue with stakeholders and implement reasonable information disclosure
- (7) Management System: To effectively implement the management system

Results for Fiscal 2016⁷

- Six of 12 Group companies reduced their energy intensity year-on-year.
- Waste subject to final disposal at off-site landfills was reduced by 19% compared with the level of the previous fiscal year.
- Amount of waste generated decreased 2% year-on-year.
- Emissions of substances subject to the PRTR Law increased by 0.1% compared with the level of the previous fiscal year.
- Zero facility disasters occurred. • Zero facility accidents occurred.
- Two injuries with loss of workdays occurred.
- Zero problems related to chemical safety occurred. • Zero serious customer complaints were filed.
- Published an Environmental Report and participated in community events.
- EMS: All Group companies have already introduced an EMS.
- Risk assessments: All Group companies have already introduced risk assessments.

Priority Initiatives

- To support their implementation of accident countermeasures
- To improve the RC level of the entire Group by strengthening support of all Group companies

10th Medium-term Responsible Care Basic Plan (Fiscal 2017–2020)

The 10th Medium-term Responsible Care Basic Plan was formulated in order to gain greater public trust by creating the concept of the “Reborn Nippon Shokubai.” It reflects a continuation of initiatives adopted for the 9th such plan as well as actual outcomes of problems encountered; moreover, various aspects of our Responsible Care initiatives have been modified in response to requests from both inside and outside the company. We will continue to focus on the importance of fostering a safety culture.

In addition, in order to further promote our Responsible Care initiatives, we will continue to adopt improvements by setting numerical targets (as key performance indicators, or KPI) wherever possible and will evaluate them on a regular basis.



Environmental Protection

Objectives for Fiscal 2017–2020

- To reduce energy consumption by an amount equivalent to 8,000 kL of crude oil (over 4 years)
- To reduce energy intensity by 5% from fiscal 2015 levels (1% reduction annually to 103.2 L/t)
- To reduce fuel consumption intensity for road transport by 5% from fiscal 2015 levels (1% reduction annually to 33.4 L/1,000 t-km)
- To promote modal shift
- To maintain zero emissions (Quantity of final off-site landfill) ≤ (Total amount of waste generated × 0.1%)
- To reduce emissions of substances subject to the PRTR Law by 25% from fiscal 2015 levels (81 t/y)

Priority Initiatives

- 1) To promote energy conservation initiatives and technical reviews in order to reduce waste and release of PRTR-controlled chemical substances
- 2) To consider utilization of renewable energy
- 3) To evaluate contributions to CO₂ emissions reduction throughout the life cycle of our own products through c-LCA
- 4) To ensure proper management of equipment using fluorocarbons and take steps to suppress emissions



Process Safety and Disaster Prevention

Objectives for Fiscal 2017–2020

- To achieve zero accidents of Class A¹ and Class B² (zero severe process safety accidents)

Priority Initiatives

- 1) To implement initiatives intended to prevent accidents and malfunctions
- 2) To implement planned safety measures
- 3) To provide system maintenance and improvements
- 4) To enhance education and training
- 5) To strengthen the “safety first” mindset



Occupational Safety and Health

Objectives for Fiscal 2017–2020

- To achieve zero injuries with or without loss of workdays, including contractors

Priority Initiatives

- 1) To implement initiatives intended to prevent accidents and malfunctions
- 2) To implement planned safety measures
- 3) To provide system maintenance and improvements
- 4) To enhance education and training
- 5) To strengthen the “safety first” mindset
- 6) To enhance support for safety initiatives among our contractors

Definitions

- ¹ Level 9 or higher according to the Nippon Shokubai method on the Japan Petrochemical Industry Association chart
² Level 3 to 8 according to the Nippon Shokubai method on the Japan Petrochemical Industry Association chart



Chemical Safety

Objectives for Fiscal 2017–2020

- To achieve zero problems related to chemical safety (legal or social problems)

Priority Initiatives

- 1) To collect and share regulatory information and safety information on hazardous chemical substances, ensure compliance with laws and regulations, and provide information to customers
- 2) To improve the functioning of our chemical substance management system, ensure information granularity, and promote centralized information management
- 3) To appropriately comply with the laws and regulations on chemical substances both inside and outside Japan
- 4) To promote Global Product Stewardship (GPS) (by participating in the Japan Initiative of Product Stewardship (JIPS) launched by the Japan Chemical Industry Association)



Quality

Objectives for Fiscal 2017–2020

Promotion of company-wide quality initiatives

- To improve customer satisfaction
- To attain more trust from customers
- To achieve “Zero quality complaints”

Priority Initiatives

- 1) To promote efforts to prevent quality issues
- 2) To establish a specialized quality assurance system with the capacity to respond to customer needs and promote new products and new businesses
- 3) To strengthen the quality assurance initiatives of Group companies inside and outside Japan
- 4) To continue improving the quality assurance system and strengthening our quality audits to verify product integrity and earn customer trust
- 5) To foster quality awareness throughout the company by continuously implementing quality training and adopting a quality mindset



Communication with Society

Objectives for Fiscal 2017–2020

- To promote dialogue on Responsible Care initiatives with local residents and implement appropriate information disclosure

Priority Initiatives

- 1) To participate actively in RC community dialogue meetings and community social activities
- 2) To disclose the status of RC initiatives to stakeholders through the company website and the CSR Report



Developing RC among Our Group Companies (Measures Common to Our Group Companies)

Objectives for Fiscal 2017–2020

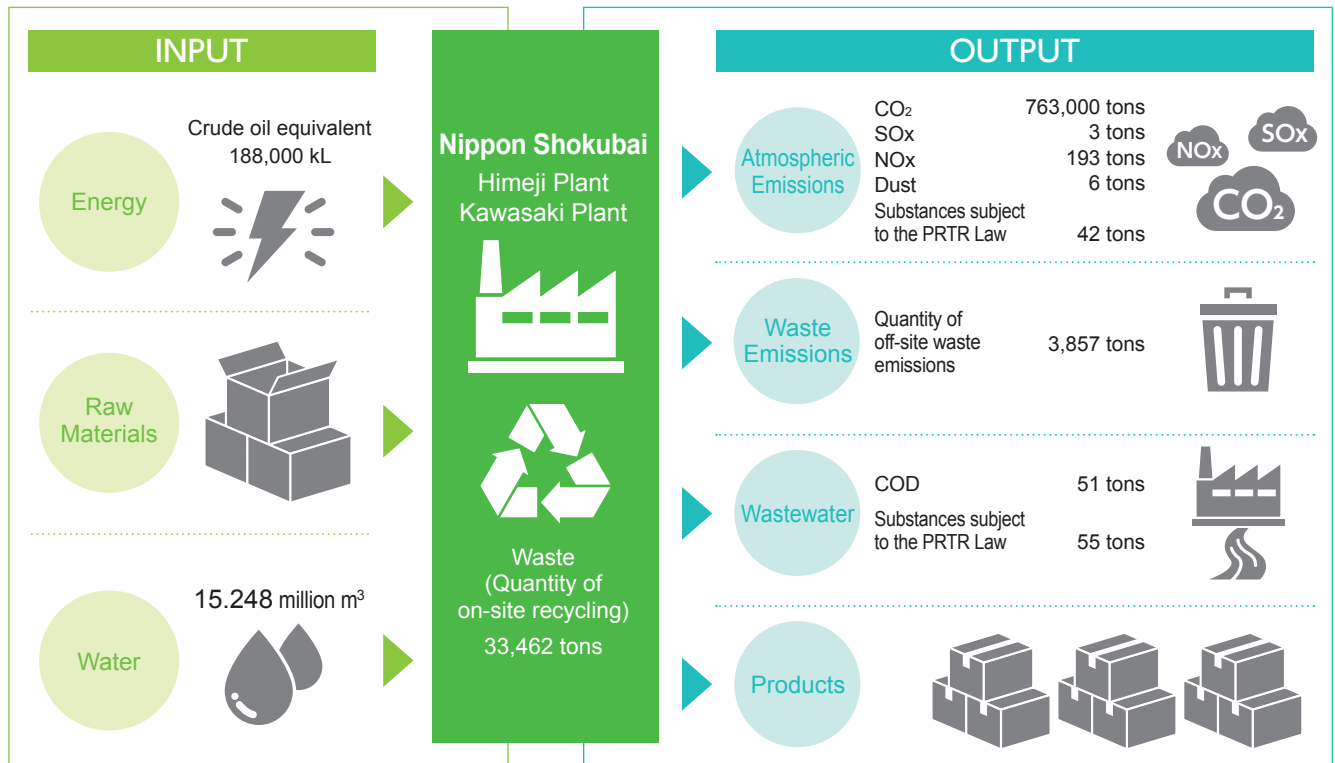
- (1) Environmental Protection
 - To reduce energy intensity
 - To reduce disposal at off-site landfills (Group companies in Japan)
 - To reduce the amount of waste (Group companies outside Japan)
 - To reduce emissions of substances subject to the PRTR Law
- (2) Process Safety and Disaster Prevention: To achieve zero disasters and zero accidents (equivalent to Class A and Class B severe process safety accidents on the Nippon Shokubai scale)
- (3) Occupational Safety and Health: To achieve zero injuries with loss of workdays
- (4) Chemical Safety: To achieve zero problems related to chemical safety (legal or social problems)
- (5) Quality: To receive zero serious quality complaints
- (6) Communication with Society: To maintain a dialogue with stakeholders and implement reasonable information disclosure

Priority Initiatives

To improve the RC level of the entire Group by strengthening support of all Group companies

Environmental Impacts of Our Business Operations

We are engaged in various initiatives to reduce the environmental impacts of our business operations and to provide better products and services.



Initiatives for Preventing Global Warming

Promoting Energy Efficiency

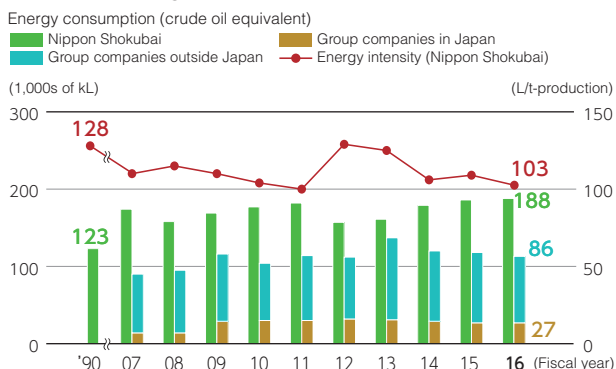
Reductions in energy intensity and CO₂ emissions intensity

In an effort to achieve the goals of the Kyoto Protocol, the Japan Chemical Industry Association has adopted the goal of reducing the chemical industry's energy consumption rate per unit of production ("energy intensity") to 80% of the fiscal 1990 level as an average value for the period fiscal 2008–12. In order to contribute to global warming mitigation without pause after fiscal 2013, the industry is pushing forward with energy efficiency and CO₂ reduction initiatives through Keidanren's Commitment to a Low Carbon Society.

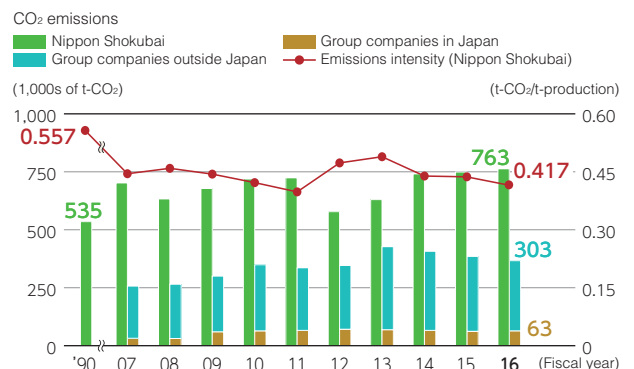
With the goal of further improving energy efficiency, we will promote energy conservation initiatives at each of our plants in view of the goals included in the Action Plan for a Low-Carbon Society adopted by the Japan Chemical Industry Association.

Our results for fiscal 2016 show that energy consumption and CO₂ emissions both increased. However, our energy intensity declined by 20% and our CO₂ emissions intensity declined by 25% from fiscal 1990 levels.

Trends in Energy Consumption and Intensity



Trends in CO₂ Emissions and Intensity



* Excludes head office, research centers, plant administration buildings and employee welfare facilities.
 * The amount of energy consumed and CO₂ emissions in fiscal 2016 totaled 8,037 kiloliters and 16,861 tons, respectively, for the head office, research centers, plant administration buildings, and employee welfare facilities of Nippon Shokubai.
 * Data for Group companies outside Japan covers the calendar year, January 1–December 31, 2016.

Promoting CO₂ Emissions Reductions Throughout the Product Life Cycle

c-LCA Assessment

The c-LCA assesses CO₂ emissions throughout the life cycle of a finished product incorporating chemical products and a comparison product containing no such chemical products. The emissions avoided are calculated as the net amount of emissions avoided as a result of the use of these chemical products.

Nippon Shokubai's products that are expected to contribute to the avoidance of CO₂ emissions

Aqua Guard	ACRYSET	ZIRCOSTAR
3.4 million tons	310,000 tons	220,000 tons
Calculation of CO ₂ emissions avoided in one year when all apartments are built as long-lasting structures	Calculation of CO ₂ emissions avoided when an application-type vibration-damping material is installed in all automobiles manufactured in one year	Calculation of CO ₂ emissions avoided when ZIRCOSTAR is incorporated in all smartphones manufactured in one year
Aqua Guard was developed to reduce the cracking and spalling of concrete. The combination of Aqua Guard with a high-range water reducer for concrete is expected to contribute to much longer-lasting concrete structures.	We developed an emulsion for application-type vibration-damping materials intended for mounting on the lower part of a vehicle body in order to reduce noise and vibration from the engine and road surface. By using such material, it is possible to keep the vehicle light and energy-efficient.	Using this product for plastic lenses, displays, and other optical materials increases the energy efficiency of displays on mobile phones, smartphones, and other handheld devices, contributing to longer battery life.
Assumption for assessment Service period: The life cycle assessment assumes that a long-life apartment has a 100-year service life and a conventional apartment has a 50-year service life. CO ₂ emissions associated with the production, use, and disposal of an apartment are evaluated with reference to the "Guidelines for LCA for Buildings" published by the Architectural Institute of Japan.	Assumption for assessment The annual travelling distance is assumed to be 10,000 km with a 10-year service life. Automobiles using asphalt sheeting as a vibration-damping material are compared and evaluated.	Assumption for assessment According to the usage time described in the Carbon Footprint Product Category Rules, the product was evaluated as being in use for two years. A smartphone incorporating ZIRCOSTAR in the optical material was evaluated as achieving a 3.6% reduction in power consumption as an energy-efficiency benefit.

Note: The above assumed values are for comparative purposes only; the actual service life and performance are not guaranteed.

Reducing Emissions of Fluorocarbons that Contribute to Global Warming

Aggregated calculated leakage of fluorocarbons

The Act on Rational Use and Proper Management of Fluorocarbons was fully implemented in April 2015 and covers the entire lifecycle of fluorocarbons from production to disposal.

As a "user of specified products," we carry out scheduled simple inspections and periodic inspections as required by law. In addition, the amount of fluorocarbon leakage calculated in fiscal 2016 totaled 2,276 t-CO₂ for the entire company, comprising 1,059 t-CO₂ from the

Himeji Plant and 1,199 t-CO₂ from the Kawasaki Plant. We are committed to reducing the calculated leakage amount in the future.

Calculated Leakage of Fluorocarbons in Fiscal 2016

	(t-CO ₂)
Himeji Plant	1,059
Kawasaki Plant	1,199
Others	19
Entire company	2,276

Calculating the CO₂ Emissions Resulting from Our Entire Supply Chain

Calculation of Scope 3 emissions

We report our greenhouse gas (GHG) emissions according to the three categories set forth in the GHG protocol: Scope 1, 2 and 3.

- Scope 1** Direct emissions: GHG emissions resulting from the burning of fuel or other products as part of business operations
- Scope 2** Indirect emissions: GHG emissions resulting from purchased energy, such as purchased electric power
- Scope 3** Other indirect emissions: GHG emissions resulting from operations across the entire value chain (from resource extraction to product disposal)

We will continue to calculate Scope 3 emissions in the future as we investigate the possibility of reducing CO₂ emissions resulting from all corporate activities.

Trend in Scope 3 Emissions

No.	Category	Emissions (1,000 t-CO ₂ e)		
		FY2014	FY2015	FY2016
1	Purchased goods and services	1,418	1,508	1,569
2	Capital goods	51	22	53
3	Fuels and energy-related activities (not included in Scope 1 or Scope 2)	55	58	58
4	Upstream transportation and distribution	13	13	14
5	Waste generated in operations	4	8	9
6	Business travel	0.2	0.3	0.3
7	Employee commuting	0.7	0.8	0.8
Total		1,543	1,610	1,704

Interview

Improving process efficiency to achieve greater energy efficiency

We undertook construction to improve the efficiency of the EO process during periodic maintenance in 2016. I served as head of the construction team at the worksite, and my main role was to ensure the work proceeded safely, as planned, and according to schedule. Although ensuring safety during construction is of course a process that requires dealing with highly reactive substances, we paid close attention to follow-up processes after construction. As several construction projects overlapped, the work presented a challenge, but we were able to finish the task within the allotted time thanks to an accident-free record and the cooperation of the parties concerned.

We also carried out the same type of work at the Ukishima Plant. As a result, we were able to reduce energy consumption by 462 kL of crude oil equivalent annually and eliminate 976 t-CO₂ emissions in total.

Katsuhiro Kinoshita Production No. 1 Section, Kawasaki Plant



Initiatives for Eco-friendly Distribution

Promoting Modal Shift

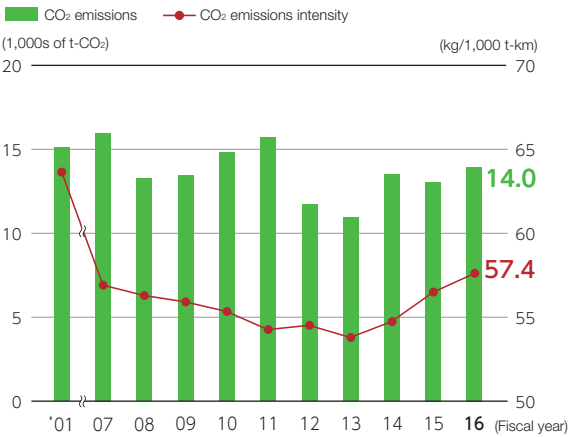
As a means of fighting global warming through our logistics operations, we are taking steps to reduce our CO₂ emissions intensity and implement exhaust gas countermeasures to control air pollution. Although changing economic conditions can affect the amount of goods we ship and our CO₂ emissions, we are implementing initiatives to reduce CO₂ emissions intensity. These include modal shift, improved transport efficiency, introduction of digital tachometers (including GPS and drive recorders), and

* An environmentally friendly transportation system established with the partial amendment of the "Kawasaki City Ordinance for Conservation of Life Environment, including Pollution Prevention."

energy-efficient vehicle operation such as minimized idling and the installation of energy-efficient tires.

As an air pollution control measure, we adopted the Kawasaki Eco-Transport System* (effective April 1, 2010) and began promoting three initiatives: eco-friendly driving and display of "eco-drive" stickers; elimination of vehicles that do not comply with laws regulating NO_x and PM emissions; and widespread adoption of low-emission and energy-efficient vehicles.

Trends in CO₂ Emissions and Intensity Attributable to Domestic Logistics



Railway tank cars containing EO, our main product



Eco-drive sticker

RC Training

We provide ongoing employee training in Responsible Care for the purpose of improving their knowledge, skill, and understanding of overall RC initiatives.

In keeping with our training curriculum for fiscal 2016, we provided this training to new employees entering our company; to those being promoted to the position of subsection chief; and to those being promoted to manager.

We intend to continue improving our RC training capabilities in the future.



RC training for recently hired employees

In Focus

Taizo Yatagai, the company's second president, appears as the main character in the television drama *Honō no keiei-sha*

In the business novel *Honō no keiei-sha* ("avid entrepreneur") written by Ryo Takasugi, the main character was based on Taizo Yatagai, the second president in our company's history. A drama based on this novel was broadcast on national television (broadcast nationwide on March 19, 2017, on Fuji TV's 26 affiliated stations). In addition to the actors' performances, our Kawasaki Plant, which was the stage of the drama, was actually used as the location for the filming of this powerful story.



Shooting on location for the drama *Honō no keiei-sha*

Definitions
Modal Shift
 By changing our shipping method toward bulk transport using railways and ships, we are optimizing our transport method to conserve energy and reduce our environmental impact.

Ton-kilometer
 Transport ton-kilometer is a unit of transportation measurement referring to freight transport volume. As an index for precisely expressing transport as an economic activity, it is the multiple of freight haul distance (in kilometers) and the transported freight weight (tons).

Pollution Control Initiatives Targeting Air and Water

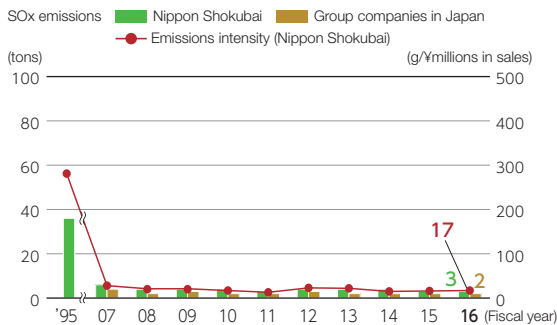
We are working to reduce the environmental impact by introducing waste liquid incineration equipment and high-performance activated sludge treatment equipment.

To control air pollution, we are taking steps to reduce consumption of fuel oil and are converting fuel sources to natural gas while monitoring our emissions of SOx, NOx and dust.

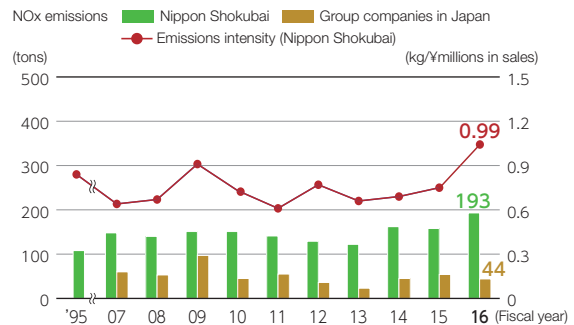
In an effort to minimize water pollution, we collect and reuse

wastewater discharged from the production process. We have also installed activated sludge treatment equipment and waste liquid incineration equipment to reduce chemical oxygen demand (COD), an environmental impact of wastewater discharge.

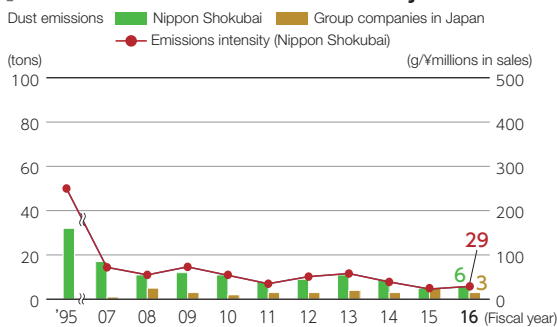
Trends in SOx Emissions and Intensity



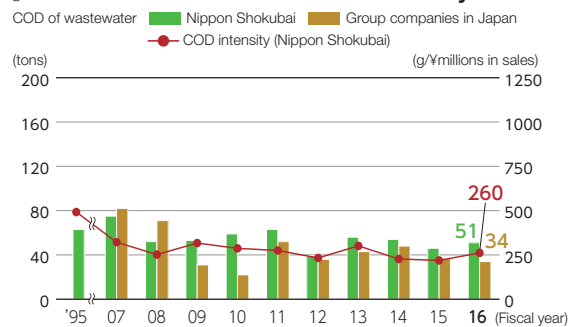
Trends in NOx Emissions and Intensity



Trends in Dust Emissions and Intensity



Trends in COD of Wastewater and Intensity



Note: Regarding the values agreed to by the city and prefecture, SOx emissions total 1/50th and dust emissions total 1/10th. NOx and COD totals are below the agreed values.

Waste Reduction Initiatives

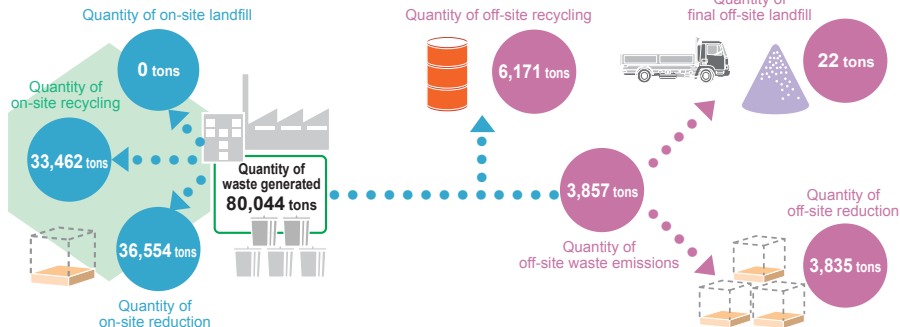
We are striving to reduce the amount of waste subject to final disposal at off-site landfills.

Addressing waste reduction is a necessary initiative to support the emergence of a society committed to recycling. By achieving and continuing our initiative toward zero emissions (defined as “reducing the quantity of waste subject to final disposal at off-site landfills to

less than 0.1% of total amount of waste generated”), we are promoting the sorting for recovery and recycling of our waste.

In fiscal 2016, we are continuing to implement our zero emissions policy by reducing the amount of waste subject to final disposal at off-site landfills through on-site treatment of production residues and by implementing thorough sorting for recovery and recycling.

Waste Flowchart



Definitions

SOx

A hazardous air pollutant. This is a general term for sulfur oxides such as sulfur dioxide (SO₂) and sulfur trioxide (SO₃), which are generated mainly from the burning of fossil fuels.

NOx

A general term for nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO₂). These substances contribute to acid rain and photochemical smog.

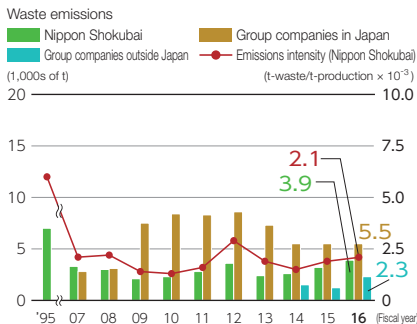
Dust

Fine particles generated through incineration of materials and other processes

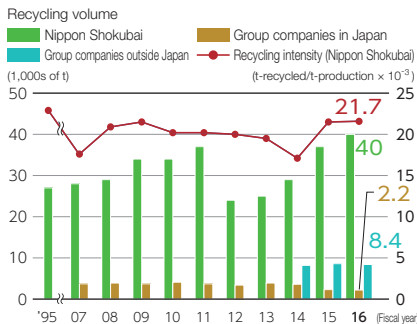
COD (Chemical Oxygen Demand)

An index of water pollution caused by an organic substance. It represents the volume of oxygen consumed when an organic substance is oxidized.

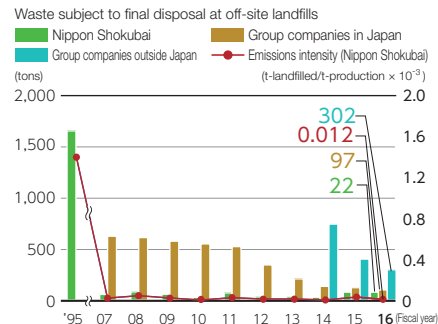
Trends in Waste Emissions and Intensity



Trends in Recycling Volume and Intensity



Trends in Amount and Emissions Intensity of Waste Subject to Final Disposal at Off-site Landfills



Note 1: Increased as a result of the inclusion, in the scope of this report, of one additional Group company in Japan in fiscal 2009.
 Note 2: The reporting period for Group companies outside Japan is Jan. 1–Dec. 31, 2016.

Chemical Substances Control Initiative

We are focused on reducing our chemical emissions.

In fiscal 1995, we participated in a voluntary PRTR survey undertaken by the Japan Chemical Industry Association and have set out to reduce our emissions of chemical substances into the environment.

In fiscal 2016, we released 98 tons of substances subject to the PRTR Law, which represents a 14% decrease in emissions compared to fiscal 2010 levels.

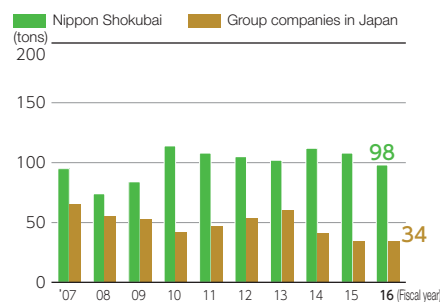
We remain focused on further reducing emissions toward our fiscal 2020 target of a 25% reduction from fiscal 2015 levels.

Top 10 Substances Subject to the PRTR Law Released in Fiscal 2016

No.	Government Designation No.	Substance Subject to the PRTR Law	Released into Atmosphere	Released into Water	Total Emissions (tons)
1	405	Boron compounds	0.0	39.3	39.3
2	4	Acrylic acid and its water-soluble salts	10.6	0.0	10.6
3	321	Vanadium compounds	0.0	10.2	10.2
4	80	Xylene	6.8	0.0	6.8
5	300	Toluene	6.7	0.0	6.7
6	58	Ethylene glycol monomethyl ether	3.7	0.0	3.7
7	56	Ethylene oxide	3.3	0.0	3.3
8	411	Formaldehyde	1.4	0.6	1.9
9	12	Acetaldehyde	1.8	0.0	1.8
10	1	Water-soluble zinc compounds	0.0	1.5	1.5

Note: In fiscal 2010, acrylic acid and its water-soluble salts, vanadium compounds, and other substances were included in the PRTR.

Trend in Emissions of Substances Subject to the PRTR Law



By incorporating state-of-the-art technology in existing equipment, we were able to reduce emission of substances subject to the PRTR Law.

The exhaust gas combustion equipment incorporating our own catalytic oxidation technology has been used in our manufacturing facilities since the 1980s to process substances subject to the PRTR Law. However, we have continued to study ways to further reduce the emissions from this equipment.

As part of this initiative, we studied simulated gas flow to the catalyst and safety measures in collaboration with each department in order to utilize existing equipment to the utmost as we introduced the most advanced technologies. As a result, we were able to upgrade the equipment for reduced emissions and improved safety.

We will continue to work together with other departments and ensure that we value the skills and technologies inherited from our many senior workers so that we can reduce the environmental impact by suggesting various innovations.

Keigo Nakashima Production No. 1 Section, Chemicals Production Dept., Himeji Plant



PRTR (Pollutant Release and Transfer Register)

A regulatory system that requires the reporting of emissions of designated chemical substances into the air, water and soil as well as the volume of waste transferred. Data compiled and submitted to governmental agencies are disclosed to the public.

Environmental Accounting

The values determined in our environmental accounting were aggregated according to the *Environmental Accounting Guidelines for the Chemical Industry* published in 2003 by the Japan Chemical Industry Association and the Japan Responsible Care Council. We also made reference to the *Environmental Accounting Guidelines 2005* published by the Ministry of the Environment of Japan.

Environmental Protection Costs & Environmental Protection Benefits

Applicable period: April 1, 2016–March 31, 2017

(millions of yen)

Classification	Main Initiatives	Amount Invested	Expenses	Effects	Relevant Page
Environmental protection cost related to control of the environmental impacts of our production and service business operations (Business area cost)	1. Pollution Control Cost	155	2,256	No pollution problems occurred.	26, 28
	2. Global Environmental Protection Cost	269	2,133	Energy efficiency efforts resulted in a 25% reduction in CO ₂ emissions intensity from fiscal 1990 level. • CO ₂ emissions intensity Fiscal 2015: 0.436 t/t (22% reduction) → Fiscal 2016: 0.417 t/t (25% reduction)	28, 29
	3. Resource Recycling Cost	37	472	We maintained zero emissions by sorting and recycling our solid waste. • Amount of waste subject to final disposal at off-site landfills Fiscal 2015: 76 tons → Fiscal 2016: 22 tons	31, 32
Cost of controlling the environmental impacts of production and service operations occurring upstream & downstream (Upstream/downstream cost)	Reuse of drum containers	0	48	Some of drum containers are reused.	—
Environmental protection cost related to management activities (Environmental management cost)	Operation of environmental management structure; acquisition and maintenance of ISO 14001 registration	0	818	All our plants successfully acquired certifications, and we enhanced our environmental management systems.	—
Environmental protection cost related to R&D activities (R&D cost)	Reduction of the environmental impact through development and manufacturing of green products	0	1,668	Conducting R&D of catalysts for treating wastewater containing organic substance(s) and catalysts for dioxin decomposition	—
Environmental protection cost related to social activities (Social activity cost)	Environmental-related contributions	0	29	Contributing to forest development initiatives	20
Cost of dealing with environmental remediation (Environmental damage cost)	—	0	5	—	—
Total		461	7,429		

Economic Effects (Monetary Benefits) Resulting from Environmental Protection Initiatives

(millions of yen)

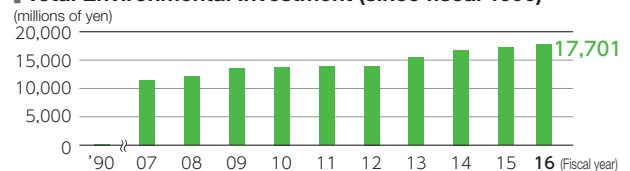
Effect	Amount
Income	27
Cost saving	2,421
	1,843
Total	4,292

Reference Total investment for the period: 15,102 million yen
Total R&D expenses for the period: 12,392 million yen

Environmental Investment

Every year, we actively invest in environmental protection measures. Beginning in fiscal 1990, we began to calculate our total investment in environmental protection.

Total Environmental Investment (since fiscal 1990)



In Focus

We earned the highest environmental rating for the 3rd consecutive time!

In May 2017, under its environmental rating financing system, the Development Bank of Japan (DBJ) granted Nippon Shokubai a rating of “Highly Advanced Eco-Friendly Initiatives.” Considering how the examination criteria have become increasingly strict every year, we highly appreciate receiving this recognition for the third consecutive time after 2008 and 2012.

Through our work, we have earned praise for three initiatives: establishing a system to further promote CSR activities in addition to implementing thorough Responsible Care initiatives and promoting company-wide efforts; undertaking continuous improvement of our production processes, improving productivity, and reducing our environmental impacts; and creating value in order to contribute to the emergence of a sustainable society based on a long-term research and development roadmap.



Environmental Ratings Award Ceremony

Definition

Environmental Accounting

This system collects and analyzes the costs and effectiveness of environmental protection in business activities, quantitatively and to the maximum extent, and makes the data available to the public. It is focused on sustainable development for companies with the goal of efficiently and effectively promoting environmental protection initiatives while maintaining a good relationship with society.

Basic Approach to Safety Issues

At Nippon Shokubai, we have singled out one overarching commitment — “Safety takes priority over production” — which we have adopted as our corporate credo and which underpins both our Group Mission and Management Commitment.

In the aftermath of the explosion and fire that occurred in our acrylic acid production facility in 2012, we grew determined to never allow such an accident to recur. We have worked together diligently to improve our safety competency throughout our company.

In the 9th Medium-term Responsible Care Basic Plan (fiscal 2014–2016), we focused on restoring public trust; as part of that effort, we identified process



safety and disaster prevention as our priorities. Moreover, we have been endeavoring to ensure thorough countermeasures against accident recurrence and fostering safety culture throughout the company.

Our 10th Medium-term Responsible Care Basic Plan, spanning the period from fiscal 2017 to 2020, was formulated from the concept of the “Reborn Nippon Shokubai” and reflects requirements submitted from both inside and outside the company related to our process safety and disaster prevention initiatives in response to problems encountered and initiatives extended in our 9th plan.

Committed to working more efficiently and effectively without being satisfied with the status quo, we are striving to effect safe and stable operation while aiming to be a responsible chemical company that continues to gain public trust.



Corporate Credo, Safety Oath

Committed to Restoring Public Trust in Nippon Shokubai as a Responsible Chemical Company

Ensuring Implementation of Risk Assessments

We have identified the risks presented by acrylic acid and all other reactive substances present inside our company and have adopted relevant safety measures. We have also implemented safety measures at our Group companies. Moreover, we have prepared handling guidelines for the highly reactive substances we handle in our company and have registered appropriate information in our chemical substance management system to ensure the information is widely shared.

We have reviewed all regulations related to change management

and risk assessment of irregular work in company-wide standards and manufacturing plant regulations while improving operations. In terms of change management, we increased safety engineer guidance in the interests of safety and have taken steps to ensure that all risks have been identified.

HAZOP exists as a method for minimizing the risks present in plants. We are systematically implementing routine HAZOP at existing plants and are incorporating non-routine HAZOP while identifying risks in a multifaceted manner.

Enhancement of Safety Education and Training

In order to upgrade the skills and expertise required to maintain safe operation, we are fulfilling the requirements for training-related risk management at our chemical plants.

Continuing an initiative launched in the preceding fiscal year at our Himeji Plant, Kawasaki Plant, and Research Centers, we invited a lecturer from the Sanyo Association for Advancement of Science & Technology to present training sessions related to risk management. These sessions were intended mainly for employees at the rank of foremen and above; about 150 employees attended the lectures.

Furthermore, a lecture on safety management attended by about 30 participants was presented to improve the safety competency of managerial staff.

In order to upgrade the ability of our personnel to minimize the risks of change management, our safety engineers attended a human resources development seminar for the Keiyo Rinkai industrial complex as well as a Safety Engineering Seminar. Moreover, we held networking events for our safety engineers to promote discussion of issues at both our Himeji and Kawasaki Plants. At these locations, we ensure our safety engineers understand why specific procedures or rules are in place, and we compiled our accumulated expertise to ensure that our institutional

memory is handed down and retained for training purposes.

The opinions voiced by our employees have encouraged us to continue conducting training both inside and outside the company in the future with the intention of improving knowledge of safe operation and increasing safety awareness.



Training in safe operation

Strengthening a Culture of “Safety Prioritization”

Safety is not something that can be provided by others; it is up to each individual to determine his or her own way forward and adopt safe practices. All employees must adopt safe practices in their organizational initiatives and personal behavior. At Nippon Shokubai, we believe this approach will strengthen our culture of “safety prioritization.”

In fiscal 2016, we used the Safety Culture Assessment Checklist of the

Safety Competency Center at our Himeji and Kawasaki Plants to conduct a self-evaluation of the Status of Safety Culture Promotion, review relevant issues, and adopt a strategy to continuously improve them.

Moreover, the Himeji Plant conducted an “exercise promoting thorough adoption of safety measures,” while the Kawasaki Plant conducted “verification of safety implementation.” Both plants undertook unique efforts and are striving to strengthen our culture focused on “safety prioritization.”

Definitions

HAZOP (Hazard and Operability Study)

A safety evaluation method for systematically evaluating the adequacy of safeguards in plants and eliminating latent risks in plants through comprehensive detection

Safety Engineer

A professional who reviews, supports, and advises on the content of prior studies in change management

Preventing Accidents Caused by a Loss of Collective Memory

With regard to the accident we experienced in 2012, we are determined to never allow such an accident to recur, and we have resolved to never let the memory of this accident fade with time. On September 29, which we have recognized as Safety Oath Day, we held a Safety Oath Ceremony opposite our Safety Oath Monument at the Himeji Plant. At that time, we renewed our vow to improve our safety competency.

We have also set September 16 to October 15 as Safe Operation Month and published *Anzen*, our safety newspaper. Through

company-wide and workplace-wide round-table safety meetings held during this month, our president instructed all employees to point out any risks that could lead to accidents at their own workplaces and urged them to determine what is required to ensure safety.

In July, our president inspected the Himeji Plant and later attended a safety meeting. In August, our president also visited the Kawasaki Plant to inspect safety management related to regular maintenance. He talked directly with employees of both plants and confirmed the implementation status of safety initiatives.



Safety Oath Ceremony



Safety Oath Monument



Visit to the Kawasaki Plant



Safety meeting at the Himeji Plant

Third-party Verification by Outside Experts

In the final year of our 9th Medium-term Responsible Care Basic Plan, we underwent a third-party verification by outside experts in order to verify the “enhancement and thoroughness of measures to prevent accident recurrence” and “initiatives to foster a safety culture” that we have been working on throughout our company for four years. We view this as a milestone on the road to becoming the “Reborn Nippon Shokubai.”

First, in October 2016, our management team conducted a Responsible Care field audit, summarized our company’s previous initiatives, and identified problems. The third-party verification was based on these findings.

The third-party verification was conducted on December 9, 2016, by Masamitsu Tamura, Emeritus Professor of The University of Tokyo, who served as chairman of the Accident Investigation Committee, and another member of the same committee, Masayoshi Nakamura, a Specially Appointed Professor of the Graduate School of the Tokyo Institute of Technology.

The professors went on a tour of the manufacturing site and conducted interviews regarding the company’s initiatives, following which they filed an evaluation indicating that the recurrence prevention measures being implemented were robust and appropriate.

Meanwhile, in order to foster greater trust among the public, the professors offered proposals regarding further enhancement of the training system for young people and safety engineers, effective change management, and effective management of atypical

operations. In addition, they made remarks to the effect that a corporate safety culture is gradually being fostered through the diligent continuation of normal operations in an obvious manner and that such changes cannot be expected to take hold in a day.

Following the professors’ comments, our president mentioned his decision to create a “Reborn Nippon Shokubai” and gain the greater trust of society by reflecting the results of the third-party verification in the 10th Medium-term RC Basic Plan while striving to further improve the company’s safety competency.



Outside experts participate in third-party verification.

Definition

Safety Competency Center

The Japan Society for Safety Engineering established this third-party safety organization in April 2013 to disseminate the safety competency evaluation system throughout industry.

Promotion of Voluntary Safety Initiatives

High-Pressure Gas Safety Accredited Plants

The Minister of Economy, Trade and Industry accredited the Chidori Plant and the Ukishima Plant located at our Kawasaki Plant as “Accredited Completion Inspection Executor and Accredited Safety Inspection Executor” for high-pressure gas in 1989 and 1991, respectively. Reaccreditation inspections are conducted every five years.

This system allows for continuous operation of high-pressure gas production facilities and safety inspections by companies with competent self-managed safety systems.

Earthquake Preparedness

Following the Great East Japan Earthquake of 2011, we reviewed our earthquake preparedness from both tangible and intangible aspects in order to prepare for a future massive earthquake and tsunami and are adopting the necessary measures in a planned manner.

Moreover, regarding the existing measures that are in place to improve the seismic resistance of high-pressure gas facilities, we confirmed that all spherical reservoirs with steel tube bracing as well as the towers and tanks considered important high-pressure gas facilities for seismic design meet the seismic standards for reporting to the relevant authorities. Regarding our piping facilities, we continued to implement seismic resistance measures in 2016.

Improving Emergency Drills

At all our plants, we systematically carry out a variety of emergency drills every year. At our Himeji Plant, we conduct joint general emergency drills in collaboration with the Himeji Fire Department and its Aboshi Fire Station, while our Kawasaki Plant conducts joint general emergency drills with the Rinko Fire Station and the local disaster prevention council.

We give thorough consideration to any problems identified in such drills so that we can review our emergency response system in time of emergency and reflect any improvements in subsequent training. We also enhance our emergency drills by adding new training programs.

Commendations

The 52nd Kawasaki Work-Related Accident Prevention Study Meeting was held on October 31, 2016. There, the Kawasaki Plant received a commendation as an organization contributing to industrial accident prevention initiatives. The Plant was evaluated for its diverse safety management initiatives, including basic safety activities; for not experiencing any accidents involving workers; and for compliance with relevant laws such as the Industrial Safety and Health Act.



Joint general emergency drill at the Himeji Plant



Joint general emergency drill at the Ukishima Plant in the Kawasaki Plant



The manager of the Kawasaki Plant accepting a commendation from the mayor of Kawasaki



Developing the Capacity to Deal with a Variety of Emergencies through Wide-Ranging Daily Training Sessions

In order to prepare for emergency situations, we must remain aware of the daily operations under way around us and must ensure that disaster-response training is not neglected. The common countermeasures taught to disaster-response personnel include training in oil fence deployment, responding to drainage malfunctions, and preparing to respond with sandbags. Along with such basic activities, our disaster-response management staff also consider the content of the training each time when conducting practical training on unique scenarios. Through these efforts, we are taking steps to eliminate generational differences in disaster prevention awareness and skill levels.

In addition, we provide primary response training for newly appointed core employees and desk training for all core employees regarding initial response to a disaster assumed to occur on a holiday or at night.

Furthermore, as for report training, we have designed and constructed an online system that allows smooth and accurate communication with employees about the possibility of participating in a disaster-response activity. It is also used to confirm the safety of employees and their family members.

Jun-ichi Kimoto Disaster Prevention Section, Environment & Safety Department, Himeji Plant



Responsible Care Activities | Logistics Safety Initiatives

Our company has commissioned Nisshoku Butsuryu Co., Ltd. to handle all our logistics operations. In order to ensure the safety and quality of our distribution tasks, they cooperate closely with the Environmental Safety and Product Quality divisions of both our Himeji and Kawasaki Plants where we work diligently to prevent distribution accidents.

Our head office conducted audits of logistics safety and interviewed personnel at Nisshoku Butsuryu regarding their Responsible Care initiatives.

We are committed to improving our ability to respond to accidents on transportation routes by periodically conducting drills. Through this effort, we are helping to prevent accidents during product shipments while minimizing damage should an accident occur.



Disaster-response drill to address shipping EO accidents that can occur en route

Responsible Care Activities | Occupational Safety and Health Initiatives

Ensuring Continuous Improvement through Our Occupational Safety and Health Management System

In fiscal 2003, we introduced our Occupational Safety and Health Management System (OSHMS). Using this system, we have been improving occupational health and safety by seeking to eradicate industrial accidents, reduce potential risk factors, and promote health and the creation of pleasant work environments.

In addition, we are committed to achieving zero industrial accidents by systematically implementing various basic safety initiatives as well as a variety of drills and training classes as part of our Occupational Safety and Health Management System.

Risk Assessment

Since the introduction of the Occupational Safety and Health Management System, the company has undertaken risk assessments of work at each workplace, reducing or eliminating the sources of risks associated with work.

Also, to align with the mandatory risk assessment of chemical substances enforced in June 2016, we are conducting risk assessments of the substances we handle in a structured manner and are implementing health risk reduction measures for workers.

Basic Safety Initiatives

In an effort to prevent industrial accidents, we are committed to daily safety initiatives targeting work-related risks. Specifically, we remain focused on our "5S" campaign in the workplace, our *hiyari hatto* practice of collecting reports of "close-call" incidents, and our *kiken yochi* (KY) or "risk prediction" campaign before work. This includes Group KY before work, KY for individual workers, and KY coordination between workers and the control room via Mobix radio. We also conduct systematic KY-focused drills and training, such as KY training with case sheets and KY workshops.

On-site Training Sessions

We hold a variety of on-site training sessions that provide operators and workers with hands-on training in skills such as valve opening and closing as well as flange disassembly and reassembly. Training also includes dealing with exposure to liquids, electrical hazards, and risks of working at height as well as demonstrations of the entanglement hazards of rotating machinery.

Addressing the Health Issues of Company Retirees

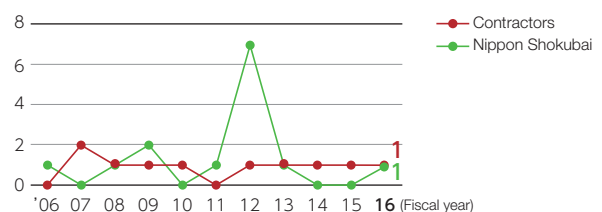
Since our company was established, we have never manufactured products containing asbestos; however, we have used insulation and sealing materials that contained asbestos.

For this reason, we support our retirees by offering consultations on health issues and providing health check-ups to those who request them. Information regarding these services is posted on our website.

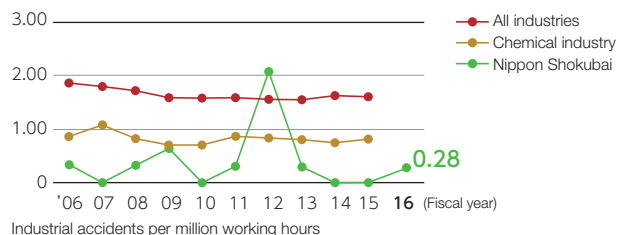
Occurrence of Industrial Accidents

In fiscal 2016, we experienced one injury with loss of workdays and four injuries without loss of workdays. Our contractors experienced one injury with loss of workdays and seven injuries without loss of workdays. During the period of our 9th Medium-term RC Basic Plan at our company, many young people were involved in industrial accidents. Consequently, we are committed to enhancing the safety education and training of our young employees. Moreover, many of our contractors handle heavy objects, and some have suffered severe industrial accidents. We will endeavor to prevent any such recurrence by highlighting case studies of industrial accidents and deploying countermeasures through networking.

Trend in Injuries with Loss of Workdays



Trend in Frequency of Injuries with Loss of Workdays



Definitions

Close-calls (*hiyari hatto*)

Even where no accidents have occurred in day-to-day operations, we monitor workers' experiences of "near misses" or "scares" in order to clarify why such events occur and how we can avoid them. From the results, we can adopt safety measures applicable to both facilities and actions.

KY Campaign (risk prediction campaign)

This campaign is intended to prevent accidents by highlighting, at meetings before work, the risk factors (unsafe behaviors and unsafe conditions) that remain hidden in work practices and by implementing measures to address them.

Promoting Chemical Management

We have established a Chemicals Total Management Committee and have implemented a variety of initiatives to work toward our goal of zero legal and social problems related to the chemical substances contained in products. This effort applies throughout the product life cycle from the R&D stage to disposal at the end of the product service life.

We are upgrading our internal systems across the global operations of our Group in order to comply with national and international laws and regulations related to chemical products. Moreover, we are committed to providing our customers with information on relevant laws and regulations as well as product safety information.

Ensuring the Safety of New Products

We have introduced a gate system at each stage from R&D to commercialization. In order to maintain safety throughout the product life cycle that encompasses material procurement, processing, production, application, and disposal according to the terms of Responsible Care, we apply our technical expertise at each stage to determine whether to proceed to the next stage.

Product Safety Initiatives

We prepare GHS-compliant SDSs, warning labels, and Yellow Cards for the logistics sector and provide information to customers while promoting training sessions for our employees. Regarding application-specific products used in pharmaceutical raw materials, pesticides, cosmetics, and food additives, our Product Safety Review Sub-committee conducts stricter checks on product safety while ensuring compliance with the Product Liability Act.

Accommodating Chemical Registration Requirements Within and Outside Japan

In collaboration with specialized institutions and our Group companies outside Japan, we are responding appropriately to laws and regulations both within and outside Japan that require us to register chemical substances. Regarding the European Union's chemical regulation known as REACH, we registered all substances subject to the two registration deadlines of November 30, 2010, and May 31, 2013. We will continue to promote such initiatives toward the upcoming May 31, 2018, registration deadline. We also intend to respond to new chemical registration regulations adopted in other countries.

Addressing Import/Export Controls

In order to ensure legal compliance regarding imports and exports, we have streamlined our process for strengthening company regulations; determining whether a product is subject to import/export restrictions; keeping our employees informed about whether a product has been subject to import/export restrictions; recording applicable items on the relevant SDS; and improving our shipping management system for coordination with our enterprise resource planning (ERP) backbone accounting system. We also conduct regular internal training on import/export management.

Green Procurement Initiatives

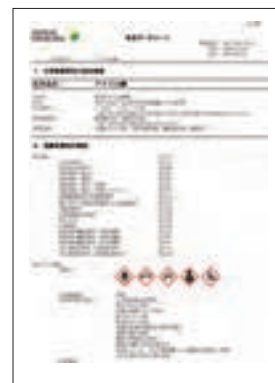
For substances that are regulated or highly hazardous, we have independently assigned them to two categories: "prohibited substances" and "restricted substances (handling restricted depending on product application)." We are promoting the development of green products and the procurement of raw materials with low environmental impact while determining and controlling the inclusion of such substances in our products.

Promoting a Voluntary Initiative of the JCIA

We participate in JIPS (Japan Initiative of Product Stewardship), a voluntary initiative for strengthening chemical management promoted by the Japan Chemical Industry Association, by which a safety summary is prepared and released to the public.

Establishment of a Chemical Substance Management System

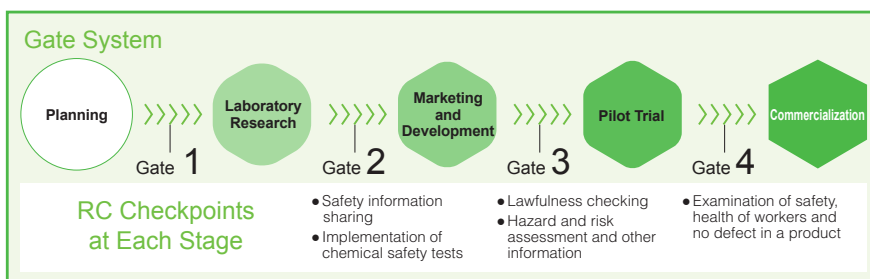
We are implementing a comprehensive chemical substance management system that can respond quickly to risk assessments, the issuance of SDS, and surveys from customers querying us on the chemical content of our products. We have created and launched this system by providing centralized management of various types of information encompassing chemicals, raw materials, hazardous materials, and regulations.



Sample SDS



Sample warning label



GHS pictograms

Definitions

GHS

An abbreviation for Globally Harmonized System of Classification and Labeling of Chemicals, GHS reflects the physical, health and environmental hazards of chemicals determined in accordance with international standards. Under this system, chemical products identified as presenting a hazard are categorized according to international standards and displayed on containers and in the respective SDS. Countries around the world have also introduced this system on the recommendation of the United Nations. This system is enforced in Japan through the Industrial Safety and Health Act.

SDS (Safety Data Sheet)

The Safety Data Sheet lists a chemical's properties as well as data on its hazards, applicable laws, proper handling and transportation requirements, and specific emergency response measures in a prescribed format. We prepare an SDS for each of the products we manufacture and develop and provide them for our customers. We are implementing a system for distributing these documents to all employees through our chemical substance management system.

Yellow Card

Carriers who transport hazardous products must carry a yellow card for reporting information about their cargo to fire squads in the event of an accident. The yellow card lists a product's hazards, first aid procedures in an accident, and emergency contact information. As part of its promotion of Responsible Care, the Japan Chemical Industry Association prepares and manages guidelines on the procedures for preparing a yellow card in order to strengthen first aid measures in the event of an accident.

Promoting Quality Initiatives

Our basic policy related to quality is to provide products and services that fully satisfy our customers while earning their trust. We also strive to maintain or improve our quality levels.

Customer Satisfaction Initiatives

All our plants and all Group companies engaged in manufacturing and distribution both within and outside Japan have introduced quality management systems. From the product development stage through to manufacturing and delivery, we implement our quality assurance initiatives from the customer's perspective.

We are dedicated to continuous improvement of our quality management system to ensure our customers are satisfied with the stable high quality of our products and services.

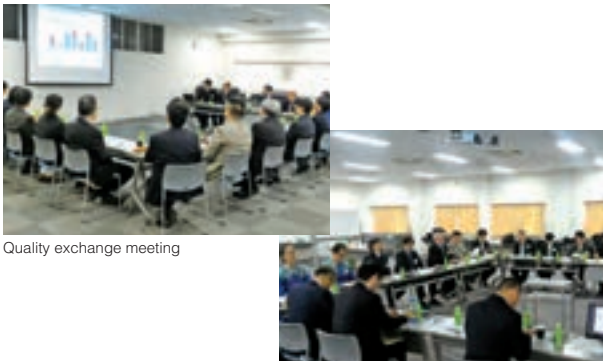


Quality control meeting

Promoting Initiatives to Address Quality Issues

We respond quickly to any quality issues that arise and share information throughout the company by compiling it into a database to visualize the progress of the response. At the same time, we are preventing quality issues from occurring through company-wide distribution of case studies.

In addition, we provide appropriate advice on quality issues to Group companies inside Japan, conduct quality exchange meetings and quality roundtables, and promote quality initiatives throughout our Group. In this way, we remain proactively committed to preventing the emergence of quality problems.



Quality exchange meeting

We also provide advice to our Group companies outside Japan on the topic of quality issues. This includes the sharing of quality-related information via cloud servers and the convening of quality managers' meetings that bring together members from our various locations outside Japan. As for particular quality initiatives at individual sites, managers are encouraged to introduce prevention initiatives and exchange opinions so that they can incorporate the innovative suggestions that are shared.



Quality assurance managers' meeting at Himeji Plant



Strengthening the Audit System

We established a supplier audit system based on our quality management system in order to uphold product safety while earning public trust. We continue to strengthen quality audits at all our plants and production sites both inside and outside Japan in order to support stringent quality control practices at our company in response to the growing social demand for reliable, high-quality products.

Introducing Products with Halal Certification

We have acquired halal certification from the Japan Muslim Association for our products following approvals granted by the Shariah Research Institute of Takushoku University.

Parts of Southeast Asia, most notably Malaysia and Indonesia, are home to many Muslims, and demand has been increasing from food-related businesses for halal-certified ingredients and production processes. In 2014, in response to this situation, we acquired halal certification for our organic acids used as food additives (including succinic acid and fumaric acid). In 2015, we acquired certification for our food-additive-grade, feed-additive-grade, and industrial-grade sodium polyacrylate. As a result, we expect demand to continue increasing in Southeast Asia. By responding to social needs, we are providing society with greater richness and comfort across a wide range of fields.

Note: The products for which we have acquired halal certification as of April 1, 2017, are succinic acid, succinic acid disodium, fumaric acid, maleic anhydride, AQUALIC FH (a thickener), AQUALIC MH (a feed binder), and AQUALIC IH (a flocculant).

Definitions

Green Procurement

This initiative responds to the national policy to promote the purchase of products and raw materials with reduced environmental impact through recycling and the like. This initiative guides companies in their purchase of raw materials and parts for products from suppliers to promote the preferential selection of products with the least environmental impact.

JIPS

To achieve the UN-mandated goal of "minimizing chemical risks to human health and the environment from manufacturing and using chemical products with the aim of achieving the targets by 2020," the chemical industry is strengthening its chemical management on a global scale. The Japan Chemical Industry Association is promoting an initiative named Japan Initiative of Product Stewardship (JIPS) in Japan. It conducts risk evaluations of chemicals, prepares safety summaries that clearly list the results of the evaluations, and releases this information to the general public to improve public awareness.

Risk Assessment of Chemical Substances

Chemical risk assessment entails evaluation of the risk of various toxic hazards associated with chemical substances. Chemical manufacturers have the social responsibility to minimize the risk of chemical substances and are required to implement voluntary Responsible Care activities.

Halal Certification

A certification with religious relevance, granted by the relevant organizations when certain standards are satisfied, for products and services targeted at Muslim customers.

Himeji Plant

Plant Outline

Plant Manager: Kazukiyo Arakawa, Executive Officer
 Location: 992-1 Aza-Nishioki, Okihama, Aboshi-ku, Himeji
 Number of employees: 1,080 at the Himeji Plant;
 91 at research centers in the Himeji district
 Products: Acrylic acid, acrylates, maleic anhydride, superabsorbent polymers, resin modifiers, electronic information materials, De-NOx catalysts, dioxins decomposition catalysts, and other products

Fiscal 2016 Results of RC Activities

- Regarding the safety record at our plant, we registered no injuries with loss of workdays and four injuries without loss of workdays.
- We initiated risk assessments of chemical substances in compliance with the partial revision of the Industrial Safety and Health Act.
- We improved our change management so that risks arising from change can be identified and appropriate countermeasures can be smoothly implemented.
- We reduced emissions of substances subject to the PRTR Law by 12% compared with the level for the preceding fiscal year.

In fiscal 2016, in order to foster a safety culture and raise awareness of safety, we continued to implement an exercise titled "Thorough Awareness of Safety Prioritization and Action." We also engaged in a variety of activities to prevent accidents and malfunctions.

In the area of occupational health and safety, we formulated and instituted specific evaluation methods and rules for risk assessments regarding the hazards of chemical substances.

As for process safety and disaster prevention, we expanded the scope



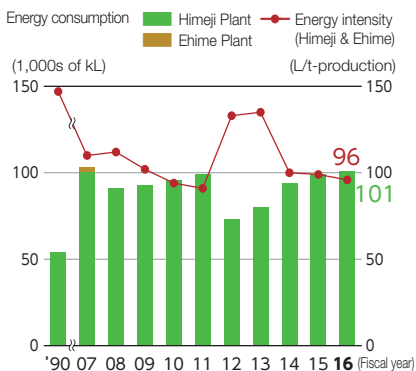
Kazukiyo Arakawa, Plant Manager

of our risk assessment checklist related to change management and improved the smoothness of the database workflow.

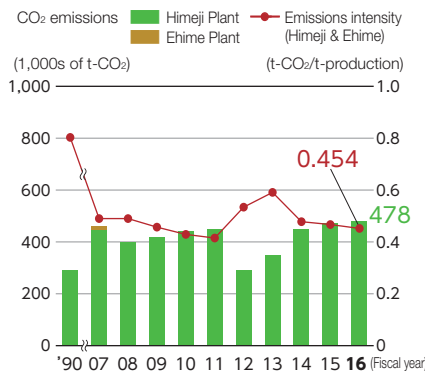
Looking to environmental protection, we reduced emissions of substances subject to the PRTR Law by 12% compared with the level of the previous fiscal year by upgrading exhaust gas combustion equipment.

We will continue with our diligent efforts to ensure safe and reliable operations in order to gain further public trust as a responsible chemical company.

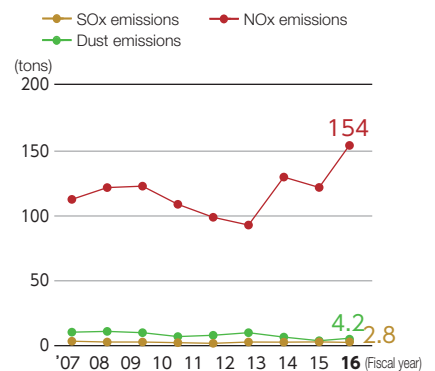
Trends in Energy Consumption and Intensity



Trends in CO₂ Emissions and Intensity



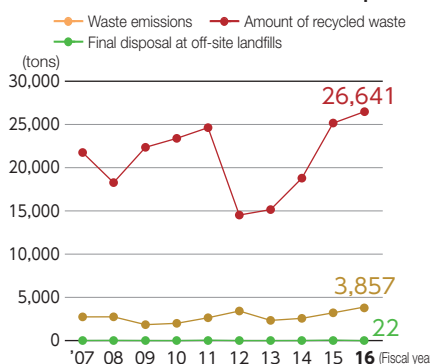
Trend in Emissions of SO_x, NO_x, and Dust



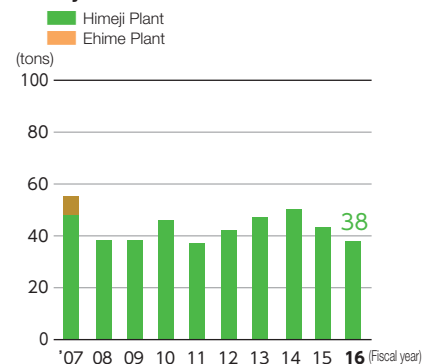
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Off-site Landfill Disposal



Trend in Emissions of Substances Subject to the PRTR Law



As of fiscal 2007, the Ehime Plant stopped production.

Kawasaki Plant

Plant Outline

Plant Manager: Teruo Kamei, Executive Officer

Location:

- Chidori Plant 14-1 Chidori-cho, Kawasaki-ku, Kawasaki
- Ukishima Plant 10-12 Ukishima-cho, Kawasaki-ku, Kawasaki

Number of employees: 357

Products: Ethylene oxide, ethylene glycol, ethanolamine, secondary alcohol ethoxylates, polymers for concrete admixture, acrylic acid special ester, and other products

Fiscal 2016 Results of RC Activities

- Regarding our safety record, we registered no injuries with loss of workdays and only one injury without loss of workdays (contractor, heat stroke).
- Regarding process safety and disaster prevention, we experienced zero process safety accidents.
- We launched our 6th TPM (Total Productive Maintenance*) initiative (April 2016–March 2019) with an emphasis on human resource development.
- We continued our initiatives to reduce our energy intensity and reduce waste as well as our emissions of substances subject to the PRTR Law.

In fiscal 2016, we reviewed our method of assessing the risk of work involving handling of chemical substances in accordance with the partial revision of the Industrial Safety and Health Act. We also worked on risk assessment of irregular work.

TPM activities call for the participation of everyone in production and preservation efforts as advocated by the Japan Institute of Plant Maintenance. At the Kawasaki Plant, this initiative was introduced in 2001, and in the current 6th activity, we are actively engaged in human resources training and skills transfer.



Teruo Kamei, Plant Manager

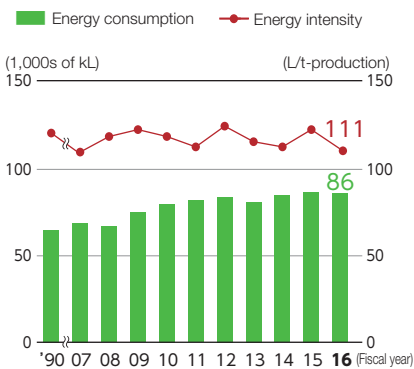
In terms of industrial accidents, we registered one contractor suffering injury without loss of workdays (heat stroke) and took thorough steps to prevent a recurrence of such an incident.

As we work towards reducing our energy intensity and minimizing emissions of substances subject to the PRTR Law, we are systematically making progress with facility renovations and the like.

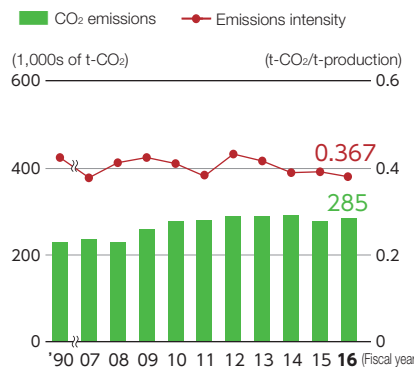
We will continue to promote our Responsible Care initiatives with the goal of ensuring our plant remains safe and reliable.

* A production method intended to derive the highest possible total efficiency from the production system

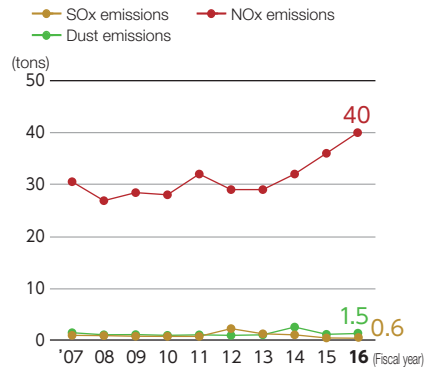
Trends in Energy Consumption and Intensity



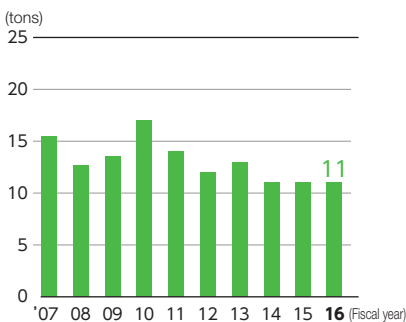
Trends in CO₂ Emissions and Intensity



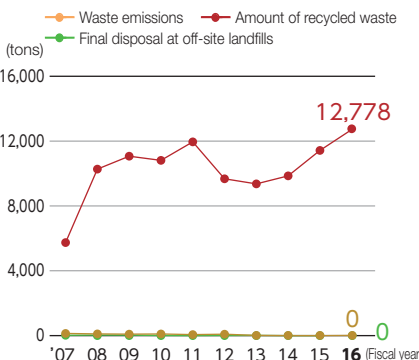
Trend in Emissions of SO_x, NO_x, and Dust



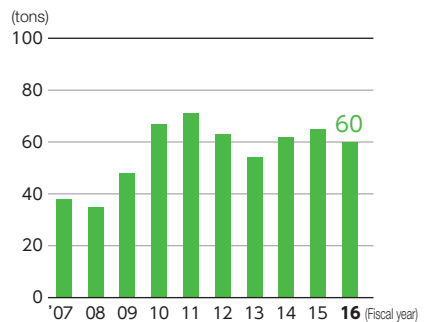
Trend in COD of Wastewater



Trend in Amount of Waste, Recycled Waste, and Waste for Final Off-site Landfill Disposal



Trend in Emissions of Substances Subject to the PRTR Law



In fiscal 2010, vanadium compounds were included in the PRTR.

Initiatives for Group Companies

In the interests of strengthening Group management, we are providing active support for the Responsible Care initiatives of our Group companies.

Responsible Care Interviews

At Nippon Shokubai, in order to actively promote concrete Responsible Care initiatives for Group companies both inside and outside Japan, we conduct Responsible Care interviews, and in fiscal 2016 we visited six companies in Japan and two outside the country.

In these interviews, we received reports of policies, planning, and achievements of each company's Responsible Care initiatives as well as reports on individual improvements on-site. We also provided advice and support from our company.

Additionally, in fiscal 2016, we invited newly appointed safety personnel from locations outside Japan to the Himeji Plant. There, they underwent training on Nippon Shokubai's safety management in order to support their development of safety initiatives globally.



Responsible Care interviews at Nippon Polymer Ind. Co., Ltd.



Responsible Care interviews at Nippon Shokubai America Industries, Inc.

Environmental and Safety Audits

We conduct environmental and safety audits at our Group companies in Japan in order to strengthen our environmental safety management system.

In these audits, we confirmed compliance with legal requirements such as the terms of the Industrial Safety and Health Act and Fire Service Act as well as regulatory compliance related to safety and the environment. We also determined whether the PDCA cycle had been incorporated through the implementation of management systems related to safety and the environment.

From the results of the audits, we identified cases with room for improvement and requested that improvements be addressed.

Through these audits, we are taking steps to improve the Responsible Care initiatives of domestic Group companies.



Environmental and safety audit at Nippon Nyukazai Co., Ltd.

Reciprocal Responsible Care Audits

We implement reciprocal audits at our Group companies in Japan twice annually for the purpose of improving the awareness and knowledge of those in charge of Responsible Care.

In fiscal 2016, Nippon Chemicals Co., Ltd. and Chugoku Kako Co., Ltd. were identified for reciprocal audits, and they audited their Responsible Care initiatives.

During these reciprocal audits, cause analysis and strategic planning are undertaken for industrial accidents that have occurred in our company and in our Group companies in Japan. This is done with a focus on human factors, material factors, and management factors in an effort to prevent a recurrence. Following an introduction of their individual improvement initiatives, the companies share information with the participation of peer groups.



Reciprocal audit at Nippon Chemicals

Group Companies in Japan

NIPPOH CHEMICALS CO., LTD.

Principal business	Manufacture and sale of iodine, intermediates for API and agro-chemicals, flame retardants, and photo/electro chemicals
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Nippon Chemicals is continuing to pursue its previously stated goal of experiencing absolutely zero industrial accidents and is working to foster a safety culture. In the interests of preventing human error, they returned to basics and conducted learning sessions with KYT risk prediction and by implementing "pointing and calling" practice. They also strengthened initiatives under the Occupational Safety and Health Management System, identified about 1,000 risks, and implemented measures targeting particularly high risks. Moreover, they conducted chemical substance risk assessments for all handled substances. Although they had maintained a clean record of no injuries with loss of workdays since September 2010, in June the company registered an injury with loss of workdays as a result of a chemical burn caused by substance with which the injured worker had had sufficient experience in handling. The company felt that this was one risk it had not yet sufficiently addressed. Beginning with this fiscal period, the company revived its employee suggestion initiative after a hiatus of about 20 years. The company will continue to promote Responsible Care initiatives with the participation of all employees.



"Pointing and calling" session

Interview

Maintaining and promoting a disaster preparation system for life-saving and relief

In order to protect employees and neighboring residents from the risk of a heart attack, Nippon Chemicals installed AEDs at two locations in its plant (the office reception area and the employee cafeteria). More than 100 individuals took AED courses from trainers at this plant. Moreover, as part of their disaster preparation training, members of the Emergency Rescue Team took basic life-saving certification classes under the guidance of the local fire station. These classes covered topics such as cardiopulmonary resuscitation, proper use of an AED, and providing first aid for injuries. In 2016, three relief squad members took a "first aid trainer course" and earned skill certificates from the Fire Chief of the Tokyo Fire Department. The company will continue to promote its life-saving assistance system.

Nobuaki Seki

Safety & Environment Department, NIPPOH CHEMICALS CO., LTD.



NIPPON NYUKAZAI CO., LTD.

Principal business	Manufacture and sale of surfactant and other chemicals
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As an occupational safety initiative for the final year of its 3rd Medium-term Responsible Care Plan (spanning fiscal 2014–2016), Nippon Nyukazai set out to eradicate Level III risks and reduce Level II risks for highly dangerous work; in addition, it introduced identification and countermeasures by conducting risk assessments of dangerous work required during emergencies.

In the area of environmental protection, the company reduced its energy intensity by making use of a subsidy system to introduce cogeneration systems at both its Kashima and Kawasaki Plants.

In terms of process safety and disaster prevention, the company conducted inspections and maintenance of high-risk production facilities and strengthened its safety systems. It also conducted joint emergency drills with the Chidori District Joint Disaster Prevention Team and participated in drills to handle transportation accidents.

Following many years of achievements in promoting safety management of hazardous materials, as well as a 10-year record of zero accidents, the company won the Chairman's Award from the Kanto-Koshinetsu Region Association for Safety of Hazardous Materials.



Mr. Kunihiro Kimata of the Environment & Safety Dept. displays the Chairman's Award of the Kanto-Koshinetsu Region Association for Safety of Hazardous Materials.



Joint emergency drill with the Chidori District Joint Disaster Prevention Team

NISSHOKU TECHNO FINE CHEMICAL CO., LTD.

Principal business	Manufacture and sale of (meth)acrylic acid derivatives and photo/electro chemicals
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Nisshoku Techno Fine Chemical's environmental protection initiatives have been focused on waste generation, energy efficiency, and emissions of substances subject to the PRTR Law. Their goal is to reduce energy intensity and emissions intensity to their respective fiscal 2015 levels. However, due to changes in wastewater treatment methods, mothballing of recycled oil-fired boilers due to aging, and other events, the target could not be achieved.

In the area of occupational health and safety, the company registered one injury with loss of workdays. The company is determined to eliminate unsafe work practices through continued risk assessments along with use of "KY" risk prediction and "HH" close-call incident reporting. The company will also increase its employees' sensitivity to hazards through internal and external sensory education with the goal of achieving zero injuries with or without loss of workdays.

Regarding process safety and disaster prevention initiatives, in addition to the annual general emergency drill, the company conducts emergency drills at each of its worksites.

Looking to voluntary improvements, in addition to its overall initiatives such as neighborhood cleanup campaigns, the company is actively seeking to introduce improvement initiatives that include safety activities.



Neighborhood cleanup



General emergency drill

Group Companies in Japan

NIPPON POLYMER IND. Co., Ltd.

Principal business Manufacture and sale of acrylic resins

In September 2016, the company opened its new administration building, replacing an aging 44-year-old structure. One of the main objectives of this new building is to protect human life and ensure BCP compliance in the event of a disaster.

In fiscal 2016, as a process safety and disaster prevention initiative, Nippon Polymer Ind. increased its in-house disaster response desk drills to twice annually in addition to conducting an annual joint disaster-response drill with the local fire brigade.

In the area of environmental protection, the company has begun to take steps to reduce the amount of burnable waste generated by the company. Specifically, by promoting sorting of paper waste from burnable waste and increasing the amount of paper sent to a recycling facility, the company succeeded in reducing the amount of combustible waste by about 2%.



East side of new administration building



Joint disaster-response drill

CHUGOKU KAKO CO., LTD.

Principal business Manufacture and sale of adhesive-processed products and fine sphere particles

In fiscal 2016, Chugoku Kako registered zero accidents. The company believes that activities such as conducting risk assessments of hazardous work, soliciting safety slogans during Safety Week, issuing commendations for safe workplaces, and providing training in close-call incident reporting and KY risk prediction contribute to an increase in safety awareness. In January, a Reciprocal Responsible Care Audit by Group companies was held at Chugoku Kako for the first time in three years. The company's improvement of the work environment through steady 5S and safety activities was evaluated. With reference to the details and opinions included in the audit, the company will further enhance its initiatives to reduce hazard areas and operational risks while working to maintain its record of zero accidents in fiscal 2017.



Safe workplace commendation



Reciprocal Responsible Care Audit

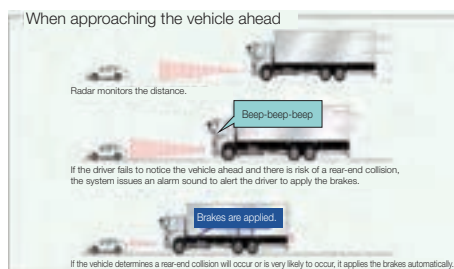
Nisshoku Butsuryu Co., Ltd.

Principal business Logistics of chemicals

The Nisshoku Butsuryu Group continues to sharpen its focus on environmental protection, distribution safety, and distribution quality. At the same time, it aims to become an even better logistics company that warrants the full confidence of shippers and customers alike for implementing a management system according to ISO international standards. The following are examples of its initiatives.

- Proactively pursuing a commitment to safety management (transportation safety management) as a truck transport company and introducing a combination of digital tachometers, GPS units, and drive recorders (comprising an advanced driving information system known as *Mimamorikun*), lane-departure warning devices, and supplemental rear-view cameras. The introduction of these safety devices follows risk evaluations supporting energy-efficient driving methods, safe driving, and accident response.
- In fiscal 2014, we introduced vehicles mounted with pre-collision warning systems* as part of our effort to minimize accidents.
- Systematically conducting voluntary checks of tankers in an effort to prevent leakage during transport.

* Pre-collision warning system (Since November 2014, this feature has gradually become mandatory.)



Tokyo Fine Chemical CO., LTD.

Principal business Manufacture and sale of stabilizers of vinyl chloride resins, antifreeze, antiseptics, and antifouling agents

In fiscal 2016, Tokyo Fine Chemical implemented Responsible Care initiatives under the corporate credo of "safety takes priority over production" with a policy of establishing a safe and effective production system.

As a result, in the area of occupational health and safety, the company registered zero injuries, while in the area of process safety and disaster prevention, it posted a record of zero facility accidents. Looking to environmental protection, electricity consumption increased due to the large increase in test work, resulting in an increase in total energy consumption and greenhouse gas emissions, however.

Regarding safety initiatives, the company conducted comprehensive joint training with the affiliated company on the same premises, Nisshoku Butsuryu Co., Ltd., and confirmed its mutual cooperation system.

The walking zone, which was maintained on the premises as part of its 5S initiative, is maintained and repaired every year by employees as part of a beautification campaign. In these ways the company is taking steps to ensure safety on the premises.

In the future, the company intends to promote its Responsible Care initiatives and strive for operational safety while aiming to strengthen and enhance its activities.



Road repairs under way

Group Companies Outside Japan

SINO-JAPAN CHEMICAL CO., LTD. (Taiwan)

Principal business Manufacture and sale of surfactant and other chemicals

In 2013, Sino-Japan Chemical Co., Ltd. introduced TPM initiatives, accruing results in terms of cost reductions and improved quality and safety. For that reason, in 2016, the company adopted a policy of seeking to win the TPM Excellence Award of the Japan Institute of Plant Maintenance.

In September 2016, an achievement report meeting was held. Under the advice of a consultant and while maintaining the goal of winning the 2017 award of excellence, the company energetically worked on activities with five subcommittees (voluntary preservation, planned preservation, education and training, individual improvement, and environment & safety and health).



On-site case report meeting on voluntary preservation



Meeting to report an overview of individual improvements

NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD. (China)

Principal business Development, manufacture and sale of superabsorbent polymers and polymers for concrete admixture

As part of our “Near Miss – Kaizen Activity 2016,” a total of 173 proposals — 45 of which were related to safety — were submitted. Twice annually, rewards are given to those who submitted the best or the most numerous proposals.

Following an official government audit, we were granted a renewal of our Safety Standardization license (June 2016–June 2019).

Twice a year, NSC conducts ongoing emergency-response drills in collaboration with the Regional Fire Department and Regional Emergency Response Center in order to improve our employees’ capabilities in the event of an emergency.



Work Safety Standardization license



Emergency response drill

SINGAPORE ACRYLIC PTE LTD

Principal business Manufacture and sale of crude acrylic acid

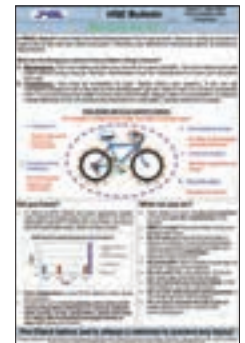
To continue to enhance SAA’s safety awareness, we conducted line-breaking training and confined space emergency drills in fiscal 2016. In addition, we adopted a quarterly personal protective equipment (PPE) checklist to ensure the PPE of all employees remains in good working order.

Due to a recent increase in the number of bicycle-related incidents on the grounds of SMAG (a conglomerate of Japanese companies in the complex), SAA collaborated with other SMAG companies to promote bicycle safety through posters, a HSE bulletin on bicycle safety, and a periodic bicycle maintenance program.

We also instituted a mandatory hygiene monitoring program, held once every three years, to monitor exposure to hazardous substances during routine work. Recent results confirmed permissible exposure levels.



Training in piping removal



Notice promoting safer bicycle use (issued by SMAG)

Interview

Improving the workshop environment for epichlorohydrin (EPIC) injection

Conventionally, EPIC had to be introduced manually, but in June 2016, an intermediate EPIC tank was installed and an automatic injection system was adopted. As a result, we were able to inject EPIC in response to the reaction temperature in addition to taking measures against odors in the workshop, which also helped to stabilize quality.

Chun wei Lin

Assistant Manager, Manufacturing Section 2, Manufacturing Department
SINO-JAPAN CHEMICAL CO., LTD.



Group Companies Outside Japan

Nippon Shokubai America Industries, Inc.

Principal business	Manufacture and sale of superabsorbent polymers, polymers for concrete admixture, water soluble polymers, and acrylic emulsions
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With the goal of continuous improvement in mind, NAII upgraded its process safety and disaster prevention initiatives. A wider range of employees underwent in-depth training that included Hazardous Materials Training, Emergency Inhibitor Injection Training, Industrial Fire-Fighting, Rescue Training, Cardiopulmonary Resuscitation, and Advanced First Aid.

In the area of environmental protection, both the Houston and Chattanooga facilities succeeded in attaining their goals of zero Air Permit deviations for the fiscal year under review. Stable operation was the primary driving force in this achievement, which also contributed greatly to the company's overall reduction in landfilled waste.

Both the Houston and Chattanooga sites showed their commitment to maintaining open communication with neighboring plants and the community through their active membership in their respective Local Emergency Planning Committees.

Furthermore, NAII Chattanooga was recognized by the LEPC and Hamilton County Emergency Management as an industry leader in emergency preparedness after it hosted the LEPC's first full-scale Hazardous Materials Emergency exercise.



Water discharge training (Houston)



Emergency drill (Houston)



Fire-fighting drill inside building (Houston)



Emergency drill (Chattanooga)



Water discharge training (Chattanooga)



Members of Local Emergency Planning Committee (Chattanooga)

PT. NIPPON SHOKUBAI INDONESIA

Principal business	Manufacture and sale of acrylic acid, acrylic esters, and superabsorbent polymers
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This marks the fourth year that PT. Nippon Shokubai Indonesia has been recognized by the Indonesian Ministry of Industry with the Green Industry Award, the highest award in its category.

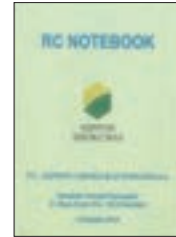
In order to achieve its Mission to ensure that all NSI employees remain committed to safety, the Safety Environment Department has implemented an action plan that involves training as well as rewards and reprimands; specifically, it conducts safety training for all field operators that encompasses human error, accident/incident experience, and the three key elements for preventing chemical burns.

In addition, we urge our employees to read the RC Notebook at every morning meeting so that each employee takes to heart the Company Group Mission "**TechnoAmenity**," the Nippon Shokubai Code of Conduct, the 10 Safety Principles, and other content. We do so in the belief that this will instill the RC spirit and inspire all employees to achieve the RC targets, especially once they understand the importance of our corporate credo, "Safety takes priority over production."

With the successful upgrading to the 2015 versions of the ISO 9001 and ISO 14001 international standards, we expect to see benefits in our daily implementation of our quality assurance and environmental management systems.



Green Industry Award ceremony



RC Notebook

NIPPON SHOKUBAI EUROPE N.V. (Belgium)

Principal business	Manufacture and sale of superabsorbent polymers
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In addition to expanding its SAP production capacity (100,000 tons/year), Nippon Shokubai Europe is investing in a new Acrylic Acid plant (100,000 tons/year).

In order to manage risks, the most severe safety standards are being applied through a Hazard & Operability (HAZOP) study and a Layers of Protection Analysis (LOPA). These studies represent key elements of process safety in the Responsible Care Division of Nippon Shokubai Europe.

In 2015, Nippon Shokubai Europe began to transition its risk analysis method to the HAZOP/LOPA procedure. Almost 2,000 working hours were invested in this study, which was supported by external specialists. It enables safety specialists and engineers to assess the design safety measures of the entire plant in a more reliable and accurate way, while indicating whether additional safeguards are required. All safeguards have finally been implemented in the design of the new Acrylic Acid plant and will be implemented in the existing Acrylic Acid facilities in the coming years.

With this approach, Nippon Shokubai Europe is applying the highest safety standards to its new Acrylic Acid plant.



Acrylic Acid plant under construction

About This CSR Report

Editorial Policy

Corporate social responsibility (CSR) is a corporate initiative through which businesses take responsibility for the impact of their operations and contribute to sustainable growth in harmony with society and the environment. It encompasses the overall concept of corporate management and seeks to enhance the trust of the company's various stakeholders.

Nippon Shokubai began publishing its Environmental Report in fiscal 2002. In fiscal 2005, information on corporate social responsibility was included, at which time this publication was renamed the "Environmental and Social Report." In fiscal 2006, we established our CSR Management Committee and reported on our CSR initiatives in order to improve our CSR implementation structure. We also appended the subtitle, "Our Commitment to CSR."

Beginning with the 2015 issue, we further expanded the content related to corporate social responsibility and renamed the publication the "CSR Report."

◆ We have focused on increasing both the readability and ease of understanding for the benefit of our stakeholders.

◆ Since fiscal 2005, we have been including the results of an objective third-party evaluation of our Responsible Care initiative undertaken by the Japan Chemical Industry Association.

◆ We prepared this report with reference to the "Environmental Reporting Guidelines" (Fiscal 2012 Version) of Japan's Ministry of the Environment and the "Sustainability Reporting Guidelines" (Version 4) of the Global Reporting Initiative.

Scope of This Report

Organization

NIPPON SHOKUBAI CO., LTD.

Osaka Office, Tokyo Office
Himeji Plant, Kawasaki Plant
Himeji Research Center
Suita Research Center
Tsukuba Research Center
(Unless otherwise stated, all data on business performance refers solely to Nippon Shokubai Co., Ltd.)

Group Companies in Japan

NIPPOH CHEMICALS CO., LTD., Tokyo Fine Chemical CO., LTD.,
CHUGOKU KAKO CO., LTD., NIPPON POLYMER IND. Co., Ltd.,
NISSHOKU TECHNO FINE CHEMICAL CO., LTD.,
NIPPON NYUKAZAI CO., LTD., Nisshoku Butsuru Co., Ltd.

Group Companies Outside Japan

Nippon Shokubai America Industries, Inc.
PT. NIPPON SHOKUBAI INDONESIA
NIPPON SHOKUBAI EUROPE N.V.
SINGAPORE ACRYLIC PTE LTD
NISSHOKU CHEMICAL INDUSTRY (ZHANGJIAGANG) CO., LTD.
SINO-JAPAN CHEMICAL CO., LTD

Reporting period: April 1, 2016–March 31, 2017

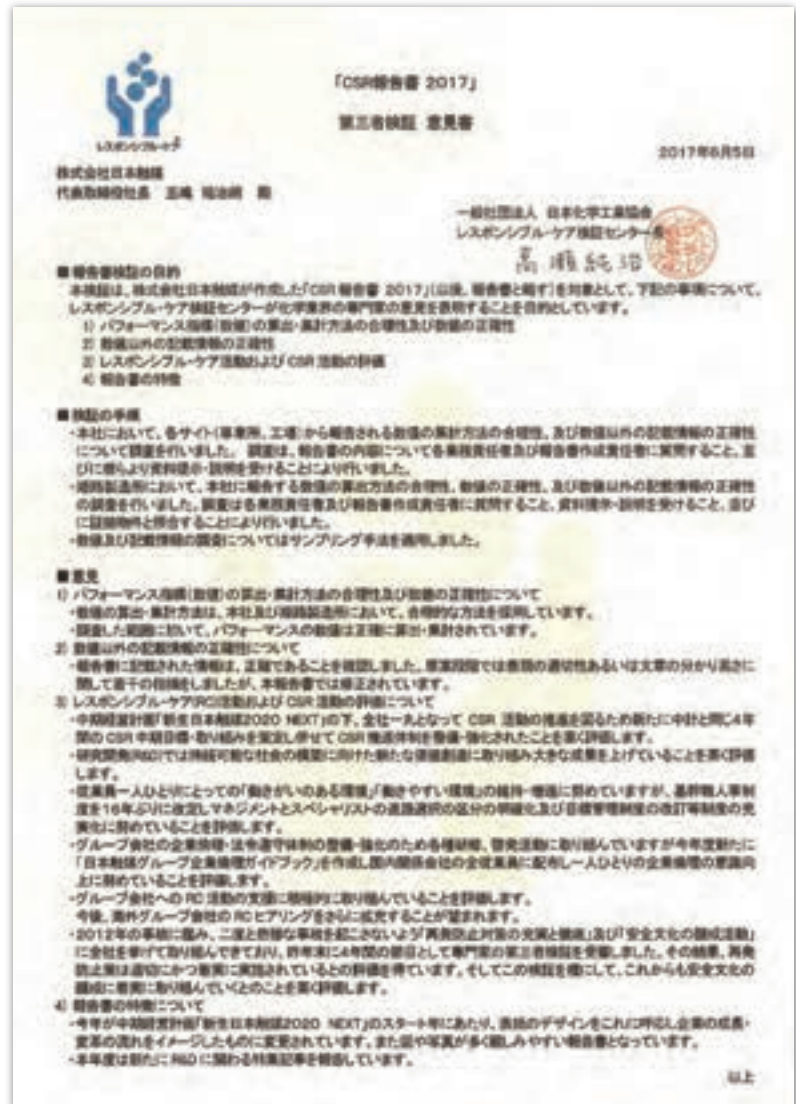
Publication date: October 2017

Scheduled publication date of next issue: October 2018

This publication is a translation of the Japanese-language edition originally published in June 2017. In the event of any discrepancies in content or differences in interpretation, the Japanese-language version shall prevail.

Third-Party Review

The Japan Chemical Industry Association (JCIA) issued the "Independent Verification – Opinions" for our CSR Report 2017 (Japanese edition) in Japanese as below. It expresses verification on rationality and accuracy, and informed opinions of chemical industry specialists on the contents related to our RC activities and the characteristics of our report.



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with our unique technology.